Department of Languages and Intercultural Education

Characteristics of the Relative Clause in Korean and the Problems Second Language Learners Experience in Acquiring the Relative Clause

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

Signature: _____

Date: 31 01 2023

To my son, John

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ABSTRACT

The purpose of this study is to investigate three pertinent aspects of the relative clause in Korean: the form-function of the relative clause, the processing of the head-final relative clause and the acquisition of relative clauses as a second language.

Based on universal typology, this study proposes that the linguistic category of the descriptive verb lies between the attributive adjective and the verb. With this identification, the study claims that the modifying ending *–(u)n* has the prototypical semantic function of the perfective aspect. The perfective aspect is, however, interpreted differently according to the verb types and this provides a solution to the form-function distinction: when the descriptive verb is suffixed by *–(u)n*, the attributive adjective expresses a permanent state; with the processive verb, the relative clause denotes the completion of action or process.

The analysis of the linear ordering of elements in the verb phrase reveals that grammatical morphemes are related in the temporal and experiential sequence by strict grammatical rules, which progressively build up conceptualisation. Contrary to the views presented in previous studies, this study argues that in Korean, due to this incremental and left-to-right processing, the relative clause has semantic constraints on the head noun.

The overall order of difficulty in the acquisition of relative clauses determined by a completion task, a combination task and a grammaticality judgment task is OP>IO>SU>DO>GE, which does not accord with the Noun Phrase Accessibility Hierarchy (NPAH). The study finds that markedness theory and configurational analysis are also unable to explain the order exhibited in this study due to the head-final characteristics of the relative clause. The processing ease is the main contributing factor for learners successfully performing the tasks by utilizing the mental lexicon, SOV canonical word order, case particles and temporal adverbs in sentence initial position.

The study also evaluates the effectiveness of instruction and the merits of pedagogical grammar. Incorporating findings from the present study, some suggestions are made for the development of a pedagogical grammar for the relative clause in Korean.

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LIST OF NOTATIONS AND ABBREVIATIONS

1. Italics:
    a. Korean words are italicised when they appear within English texts.
    b. Emphasis is italicised.

2. Bold and brackets:
    a. Some cases, head nouns of relative clauses are printed in bold and relative clauses that modify them are square bracketed.
    b. Emphasis is bold printed where italics is already used.

3. Sentence judgement:
    * Ungrammatical/unacceptable
    ? Questionable.

4. Abbreviations:

ACC	Accusative	IMP	Imperative
AN	Adjective-Noun	IND	Indicative
ASP	Aspect	INF	Inflection
ATTR	Attributive	IO	Indirect Object
CAUS	Causative	LOC	Locative
CC	Complement clause	NA	Noun Adjective
COMP	Complementizer	NOM	Nominative
CON	Conjunctive ending	Nom	Nominative ending
DAT	Dative	NP	Noun phrase
DO	Direct Object	NPAH	Noun phrase accessibility hierarchy
DV	Descriptive verb		
END	Ending	Nrel	Noun-Relative clause
FUT	Future tense	O	Object
GE	Genitive	OCOMP	Object of comparison
GN	Genitive-Noun	OP	Object of Postposition
HON	Honorific	PAST	Past tense

PG	Postgraduate	S	Subject
Pre	Present tense	SOV	Subject-Object-Verb
PRO	Propositive	STMT	Statement
PRG	Progressive	SU	Subject
PV	Processive verb	SUP	Supposition
QUO	Quotative	SVO	Subject-Verb-Object
RC	Relative clause	TOP	Topic marker
REL	Relativizer	UG	Undergraduate
RelN	Relative clause-Noun	V	Verb
RET	Retrospective	VSO	Verb-Subject-Object
RP	Resumptive pronoun		

5. Tanscription Convention

The transcription of Korean follows the Yale system of romanization.

Chapter 1 Introduction

1.1 Purpose of the study

The purpose of this study is threefold: first, this study investigates the form and meaning/function relationship between the attributive adjective and the relative clause in Korean. Since the mechanism used in the formation of the adjective is exactly the same as the relativizer used for the relative clause, questions have been raised (Hwang, 1990; Kim and Shin, 1994) regarding the syntactic and semantic distinctions between the two features. This study attempts to find the answer.

Second, this study will examine the implications of processing the head-final, left-branching relative clause in Korean. In Korean, the relative clause is presented with background information first before the identification of the head noun as in (1.1):

(1.1) na-nun [Academy sang-ul pat-*un*] **yenghwa**-lul po-ass-ta.
I-TOP Academy award-ACC receive-REL movie-ACC see-PAST-END

(1.2) 'I saw a **movie** [which received an Academy award].

By contrast, in English, the head noun 'movie' is stated first and then the relative clause [which received an Academy award] provides background information about the 'movie' as in (1.2).

The syntactic and semantic relationships between the relative clause and the head noun will also be examined in the light of processing theory.

Third, the study will investigate problems in the acquisition of relative clauses in Korean as an L2 and determine its order of difficulty. The acquisition of relative clauses in Korean involves several factors that have not yet been researched. One of the unique features of the relative clause in Korean is the relativizer. The relativizer in Korean is not a word as in English or French. It is a dependent morpheme suffixed onto the verb stem in the clause-final position e.g. *–un* in (1.1). While the English relative pronoun is marked for case, the Korean relativizer is encoded with tense and aspect, but the tense is marked differently from the way it is marked in the matrix sentence. Hence, this study, the first of its type, will investigate the acquisition of relative clauses by analyzing the correct use of the relativizer.

The result will be tested against Keenan and Comrie's (1977) Noun Phrase Accessibility Hierarchy (hereafter NPAH) and compared with other L2 acquisition

studies. Although the NPAH has been frequently studied in various languages as an example of a typological universal, few studies have been reported testing the NPAH in Korean by adult learners. Studies on the acquisition of relative clauses as a second language (hereafter L2) have mainly concentrated on English. By analysing and identifying the form-function relationship of the relative clause, and the relationship between the relative clause and the head noun in Korean, we broaden our knowledge on how syntactic and semantic factors that are language-specific affect language processing and acquisition. Findings from this study will contribute not only to Korean linguistics but also to studies of language universals, providing data from Korean.

Incorporating all the findings, the study will also explore effective methods of instruction and a pedagogical grammar for teaching the relative clause in Korean as an L2. The next section reviews the major theoretical background of this study.

1.2 Universal typology and the relative clause

In order to investigate the distinction between the attributive adjective and the relative clause in Korean, the theoretical approach adapted in this study is based on universal typology (Greenberg, 1966; Keenan and Comrie, 1977; Lehmann, 1978; Comrie, 1981; J. Hawkins, 1983; Croft, 1990). All human languages fulfil communicative functions, but the means of performing those functions are varied. Language universals are concerned with the question, "By what formal structure does each language deliver a particular function?" In order to answer this, the theory of language universals initiated by Greenberg (1966) is used to try to explain linguistic phenomena by studying a wide range of languages. This approach was based on the assumption that languages in the world essentially share the same pattern for the same functions of communication and cognition. Greenberg observed that:

> Underlying the endless and fascinating idiosyncrasies of the world's languages there are uniformities of universal scope. Amid infinite diversity, all languages are, as it were, cut from the same pattern.
> (Greenberg, 1966:xv)

The identification of typological universals is based on concrete data at surface levels of analysis and comparison of cross-linguistic data (Keenan and Comrie, 1977;

Lehmann, 1978; Comrie, 1981; Croft, 1990). Common patterns and principles exhibited in the surface structure of language have been described. For example, languages are classified into types according to particular patterns exhibited in word order, such as SOV (Subject-Object-Verb) and SVO (Subject-Verb-Object). From cross-linguistic data it has also been possible to identify implicational universals such as, if a language has SOV word order, it is predicted that the language has postpositions rather than prepositions. This cross-linguistic approach is contrasted with Chomsky's (1965) generative approach, which focuses on studies of the syntax of a few languages in-depth and works on the assumption that abstract generative grammar is innate.

However, we notice that certain forms in one language are not necessarily present in other languages. For example, there are only a few inherent attributive adjectives in Korean; on the other hand, the descriptive verb is non-existent in English. Universal typology seeks to identify and explain the grammatical structures across languages, which perform the same functions; hence semantic definition is the main motivation of the analysis (Greenberg, 1966; Keenan and Comrie, 1977). Croft (1990: 11) explains this further:

> Although there is some similarity in structure ("formal" properties) that may be used for cross-linguistic identification of categories, the ultimate solution is a semantic one, or to put it more generally, a functional solution.

This view represents the functional perspective that syntactic forms are there to perform semantic functions (Givón, 1979) and the functions of language are universal across cultures, as language is ultimately used for general-purpose communication (Croft, 1990:155). When we examine fundamental grammatical categories cross-linguistically, we can identify form-function relationships of a particular form in terms of 'what kind of grammatical structures express what kind of cognitive concepts' (Croft, 1990:172). It is one of the main objectives of this study to establish the form-function relationships of the adjective and the relative clause. These will also be compared with the equivalent categories in English.

Croft (1990) noted 'the main problematic categories for cross-linguistic comparability arise chiefly when a single form combines multiple functions' (p. 11). This exactly describes the morpheme *–(u)n* in Korean, which is used for the

formation of both the attributive adjective and the relative clause. In the following examples, the morpheme *–un* is used for an adjective in (1.3) and a relative clause in (1.4):

(1.3) coh-**un** umsik
good-ATTR food
'good food'

(1.4) mek-**un** umsik
eat-REL food
'the food which I ate'

The implication of this phenomenon is explained by the iconicity hypothesis which states 'the concepts that fall into the same grammatical category are cognitively similar in some respects' (Croft, 1990:173). However, the precise semantic function of the morpheme *–(u)n* is yet to be identified. Consequently, the reason for the two interpretations given to the attributive adjective and the relative clause (i.e., when the descriptive verb is suffixed by *–(u)n*, the tense is present and with the processive verb, the tense is past) is still unknown. It is a key objective of this study to define the semantic function of the morpheme *–(u)n* and find out how the different ways in which the structure of the grammatical construction of the attributive adjective and the relative clause in Korean reflect the structure of the concepts they express.

1.3 Processing theory and the relative clause in Korean

Language processing occurs naturally in both comprehension and production activities. Surprisingly, however, it is only relatively recently that processing has been taken into consideration in theories of grammar (J. Hawkins, 1988, 1994; Levelt, 1989; Newmeyer, 1998) and in second language acquisition studies (Clahsen, 1988b; Frazier and De Villiers, 1990; Pienemann 1998; VanPatten 1996).

J. Hawkins (1994) analyzed in depth the linear ordering in performance and grammars using hundreds of examples from typologically different languages. The results led him to claim that 'grammars are profoundly shaped by processing'; this processing need is 'motivated by the correspondences between on-line procedures

for recognizing constituent structure and the grammatical devices that make such recognition possible' (p. xi).

It has been argued that the order of the Verb-Object position in a sentence is the cause of constraints in the placement of various grammatical features within a sentence (Greenberg, 1963; Vennemann, 1975). Accordingly, the position of the relative clause construction is also constrained by the order of Verb-Object in a sentence as the one below (Slobin, 1971:69):

VO LANGUAGES:

Auxiliary	VERB	OBJECT	relative clause

OV LANGUAGES:

Relative clause	OBJECT	VERB	auxiliary

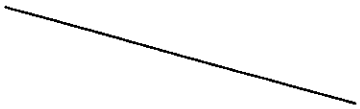
Slobin explains this word order phenomenon by suggesting a psycholinguistic constraint on grammatical form:

> The linguistic universal of modifier placement seems to exist in order to facilitate sentence processing: interposing too much material between the verb and object would place a burden on short-term memory (1971:69).

Consequently, languages typically employ either head-initial or head-final strategies for the construction of the relative clause. A good example would be the correlation between SOV word order with the head-final relative clause and SVO word order with the head-initial relative clause construction. In order to process the main clause, it is easier to process the relative clause when it occurs either at the beginning of the sentence (SOV) or at the end of the sentence (SVO) (Comrie, 1981).

What then are the differences in the syntactic and semantic relationship between the relative clause and the head noun; when the head is stated first, as in English (1.5) or finally as in Korean (1.6)? How do learners process the input and how is this related to the acquisition?

(1.5) **the girl** [that John likes] (Comrie & Keenan, 1987:3)



(1.6) [John-i cohaha-nun] **sonye**
name-NOM like-REL girl
'the girl that John likes'

Clearly, the linear ordering of the elements in the sentence has major implications in the processing of the language (J. Hawkins 1988, 1994; Levelt 1989; Newmeyer 1998); this is because language activities take place on-line in real time. J. Hawkins states:

> Processing explanations for language universals invoke principles of comprehension and production that have been derived from controlled experiments on real-time language use (J. Hawkins, 1988:328).

In order to determine the syntactic and semantic relationship between the relative clause and the head noun, it is necessary to analyse the composition of the verb phrase in Korean. The linear ordering of the verbal morphology is the key to revealing how the relative clause is related to the head noun. This is particularly vital since the relativizer is a dependant morpheme, which is suffixed onto the verb stem and expresses tense and aspect.

Bybee (1985) produced a full analysis of the semantic determinants of inflectional expression. She argued that inflectional morphemes express semantic notions and their combination is governed by two principles: *relevance* and *generality*. *Relevance* is a semantic criterion which refers to 'the extent to which the meaning of the affix directly affects the meaning of the stem' (Bybee, 1985:4). On the other hand, *generality* assumes that the inflectional category must be general enough to be applicable to all stems and their semantic content must be minimal and simple enough to be applied generally. However, *relevance* depends on cognitive and cultural salience and therefore language-specific verbal morphology needs to take into consideration.

In verb-final languages, the grammaticalization of verb phrase-internal ordering is complicated (J. Hawkins, 1994:277); Korean indeed shows a very complex verbal morphology. However, a more remarkable aspect of the grammaticalization is that

'grammatical structure is in fact a reflection of conceptual structure' (Newmeyer, 1998:115). In conceptual structure, each grammatical element denotes a semantic concept. The crucial element in this process is time:

> A basic kind of sequenced mental occurrence is the observation of events as they happen in real time. As we follow an event through time, we observe (through processing time) a continuous series of minimally different configurations.' (Langacker, 1997:250).

It has been claimed that in head-initial languages like in English, the relative clause is syntactically and semantically constrained by the head noun (Sag, 1997). Therefore, the relative clause must provide an appropriate description of the head noun. This argument has also been presented to explain the semantic relationship between the relative clause and the head noun in Korean (H.S. Lee, 1990; Han, 1992; J.B. Kim, 1998). However, under processing theory, this explanation does not fit the construction of the relative clause in Korean, due to its head-final characteristics. Greenberg (1963:103) claimed that 'the order of elements in language parallels that in physical experience or the order of knowledge'. It is one of the main objectives of this study to propose an alternative explanation for the relationship between the relative clause and the head noun, in the light of the processing theory.

1.4 Noun phrase accessibility hierarchy (NPAH)

Although the relative clause is used universally to perform communicative functions, languages vary in their accessibility of noun phrases (NPs here after) in the main sentence. Keenan and Comrie's (1977) NPAH has been one of the most cross-linguistically studied typological universals. The NPAH describes the grammatical functions of noun phrases that are accessible to relativization and presents a systematic order in the accessibility (availability) of relative clauses. The NPAH predicts that all languages follow the following hierarchical order:

Subject > Object > Indirect Object > Object of Preposition > Genitive > Object of Comparison.

'>' means 'is more accessible than'

Type one is the subject-linked clause and is present in all languages. Type two, the object-linked clause, is not present in all languages but present in more languages than type three. English has all six-noun phrases (see below), whereas, in Korean, the type six, Object of Comparison, does not exist. But if a language has the Type 5 relative clause, as does Korean, then the language must also have Types 1, 2, 3, and 4. The NPAH in Korean will be discussed in detail in 2.5.

Type 1 Subject (SU): the man [who bought the book for the girl]
Type 2 Direct Object (DO): the book [which the man bought for the girl]
Type 3 Indirect Object (IO): the girl [for whom the man bought the book]
Type 4 Oblique case (OBL): the chest [which John put the money in]
Type 5 Genitive (GE): the boy [whose book the man bought for the girl]
Type 6 Object of Comparison (OCOMP): the man [who John is taller than]
(Comrie, 1981:155; Keenan and Comrie, 1987: 7)

The significance of the NPAH is that it claims that this order applies to all languages without exception, and never skips particular types out of sequence. This claim is based on two functional explanations:

1) NPs in higher positions (e.g. SU and DO) are more frequently present than those in lower positions (e.g. GE and OCOMP).
2) NPs in lower positions need explicit marking, such as pronoun retention, to facilitate recovery of the semantic information.

(Keenan and Comrie, 1977; Comrie, 1981)

L2 acquisition studies generally support the notion that typological universals play a role in L2 acquisition (Braidi, 1999). In the acquisition of relative clauses, L2 research has been mainly concerned with the markedness of the structure and the possibility of L1 transfer with regard to the NPAH (Gass, 1979; Pavesi, 1986; Eckman *et. al.* 1988; Doughty 1991). The implication of the NPAH in L2 acquisition is whether Keenan and Comrie's claim that 'the NPAH directly reflects the psychological ease of comprehension' (1977:88), has any relevance to the order of difficulty. To pursue this question, the NPAH has been compared for the acquisition of the relative clause by adult learners in various languages: English (Gass, 1979; Pavesi, 1986; Eckmann et.al. 1988), French (R. Hawkins, 1989), Chinese, Japanese,

Persian, German and Portuguese (Tarallo and Myhill, 1983); Swedish (Hyltenstam, 1984); Spanish (Flynn, 1989). However, the results from these studies have been inconsistent. Studies in left-branching languages have been limited and very few acquisition studies in Korean by adult learners have been reported.

The linguistic characteristics of the relative clause in Korean present challenges for learners of Korean. These have not previously been studied in L2 acquisition research. This study will determine the order of difficulty in the acquisition of relative clauses by asking subjects to complete three tasks: a completion task, a grammaticality judgement task and a combination task. This will test whether the NPAH is relevant to Korean. The result will be able to confirm whether the two main theories (i.e., markedness theory and configurational analysis) that are claimed to explain the order of difficulty in the L2 acquisition of relative clauses can be applied to Korean.

1.5 Organization of the thesis

The structure of this thesis is organized as below:

Chapter 2 describes the characteristics of the relative clause in Korean from the viewpoint of universal properties of the relative clause. A comparison with the relative clause in English is made. The salient features which have been discussed cross-linguistically in the acquisition of relative clauses as an L2 will be examined: they include the head-final and left-branching construction; the form and function of the relativizers; the presence of the resumptive pronoun in the genitive position, and the relativization of nominal phrases in relation to the NPAH.

Chapter 3 investigates the form-function relationship between the attributive adjective and the relative clause in Korean, in the context of universal typology. Using Givón's time stability and Croft's prototypical correlations of syntactic categories, the linguistic category of the descriptive verb is proposed in relation to the attributive adjective and the processive verb with regard to time, concepts and qualities. Having defined the relationship of three categories, I will identify the semantic function of the morpheme *–(u)n*, and propose a prototypical semantic definition. This will clarify the form-function of the adjective and the relative clause. It will also confirm how closely linguistic complexity is tied with conceptual complexity.

Chapter 4 investigates the processing of the head-final and left-branching relative

clause in Korean. In order to determine the syntactic and semantic relationship between the relative clause and the head noun, I will first analyze the linear ordering of the elements in the verb phrase and focus on the functions of the auxiliary verb in the composition of the verb phrase. The way form and meaning are mapped out in the verb phrase and the significance of linear ordering provides an answer to the co-relationship between grammaticalization and conceptualization. Given that processing is incremental both grammatically and conceptually, I will argue that, in Korean, the relative clause has semantic constraints on the head noun, which is contrary to current theories. The role of the relativizer will be examined in the processing of the recursive left-branching relative clause in Korean.

Chapter 5 reports the findings of the acquisition of relative clauses in Korean as an L2. Empirical research on the acquisition of relative clauses in various languages as L2 is reviewed first. These present contradictory results regarding the NPAH. The order of difficulty in Korean is determined by three tasks: a combination task, a completion task and a grammaticality judgment (GJ) task. The results are discussed in the context of research findings in the acquisition of relative clauses, as well as major theories which tried to explain the order of difficulty. I will also discuss the significance of the results for the learners' processing strategies.

Chapter 6 explores the pedagogical aspect of teaching the relative clause. The effectiveness of language instruction is examined in the current communicative language teaching/learning environment. Since focus on form (Long, 1991) is found to be effective, pedagogical grammar is evaluated for effective language instruction. I will discuss the implication of language processing in L2 acquisition in the context of processability theory (Pienemann, 1998) and input processing theory (VanPatten, 1996). Some practical suggestions are then made for a pedagogical grammar of the relative clause in Korean.

Finally Chapter 7 presents a summary of the thesis along with the major findings.

In summary, this study aims to answer the following major research questions:

- To identify the salient features in the construction of relative clauses in Korean from the viewpoint of universal properties of the relative clause.
- To investigate the form-function relationship between the attributive adjective and the relative clause.
- To identify the semantic function of the modifying ending *–(u)n*.

- To investigate the effect of processing the head-final, left-branching relative clause in Korean.
- To determine the syntactic and semantic relationship between the relative clause and the head noun.
- To identify the acquisition problems faced by learners of Korean as an L2 using a sentence combination task, a grammaticality judgment task, and a completion tests.
- To determine the order of difficulty in the acquisition of relative clauses in Korean and to compare this against the NPAH and other research findings.
- To identify learners' strategies in the acquisition of relative clauses in Korean.
- To suggest an effective approach in teaching relative clauses in Korean.

Chapter 2 The characteristics of relative clauses in Korean

2.1 Introduction

This chapter describes the characteristics of relative clauses in Korean from the view of universal typology (Greenberg, 1966; Lehmann, 1978; Comrie, 1981; J. Hawkins, 1983; Croft, 1990). In order to identify universal properties of the relative clause, a wide range of languages was compared. Since the syntactic composition of relative clauses was difficult to compare between languages, the analysis was made by finding out how each language constructs the same semantic function of the relative clause (Keenan and Comrie, 1977). It has been found that the relative clause is constructed universally in the manner of:

> ... any syntactic object to be an RC if it specifies a set of objects (possibly a one-member set) in two steps: a larger set is specified, called the *domain* of relativization, and then restricted to some subset of which a certain sentence, the *restricting* sentence, is true. The domain of relativization is expressed in surface by *the head NP*, and the restricting sentence by the *restricting clause*, which may look more or less like a surface sentence depending on the language . . .(Keenan and Comrie, 1987:3, RC - relative clause).

Hence, languages adapt different strategies in the construction of relative clauses. The main features that have been discussed cross-linguistically in the acquisition of an L2 are:

- the position of the relative clause in respect to the head noun, whether the relative clause comes before or after the head noun
- the form of relative pronouns
- the presence or absence of a resumptive pronoun in the relative clause
- elements that can be relativised
- noun phrases that can be relativized
- the adjacency of the relative clause to the head noun.

(Cook, 1993; Braidi, 1999)

Based on the universal and typological background and features listed above, this chapter reviews the characteristics of relative clauses that are specific to the Korean language in comparison with English.

2.2 Definition of relative clauses in Korean

As explained by Suh (1994, pp1177-1188), H.B. Lee (1989, pp173-177) and others, before the introduction of transformational grammar, some Korean linguists classified Korean as a language without relativization because Korean does not have the equivalent of the English relative pronouns such as 'who', 'whom' 'that' or 'which'. However, in the transformation from the deep structure to the surface structure, the grammatical devices used in the construction of relative clauses have the same function as relative pronouns in English in joining the relative clause and the head noun. For example, take the same syntactic structure (S-IO-DO-V) used in Comrie's (1981:142) definition of the relative clause:

(2.1) a. **chayk**-ul ilk-ess-ta.
book-ACC read-PAST-END
'(I) read a book.'

b. Youngswu-ka Peter-eykey **chayk**-ul cwu-ess-ta.
name-NOM Peter-to book-ACC give-PAST-END
'Youngswu gave Peter a book.'

When the sentences (2.1a) and (2.1b) are joined by relativizing the coreferential noun, *chayk* 'book', which is the object of the main sentence, a deletion occurs as below:

c. Youngswu-ka Peter-eykey {**chayk-ul**} cwu-essta. a. **chayk**-ul ilk-ess-ta.
↓
cwu-n

(2.2) → Youngswu-ka Peter-eykey { Ø } cwu-n **chayk**-ul ilk-ess-ta.
name-NOM Peter-to give-REL book-ACC read-PAST-END
'(I) read the book that Youngswu gave to Peter.'

The sentence (2.1b) is positioned in front of the head noun *chayk* in (2.1a) and the coreferential noun *chayk* with the postpostional particle *-ul*, is deleted resulting in a 'gap'. The verb finite form *cwuessta* 'gave' is changed to nonfinite form *cwun* by the

verb stem *cwu* plus the relativizer *–n*.

Before the introduction of generative grammar the relative clause in Korean was simply described as a modifying clause, with its main function being to modify the noun (H.P. Choy, 1937). Since then studies on the relative clause in Korean have followed the development of generative grammar. For example, relativization has been explained with theories of syntactic movement (Han, 1992); principles and parameters (Kang, 1986); barriers (D.W. Yang, 1987); empty category (H.S. Lee, 1990); deletion of coreferential noun or deletion of pronoun (I. S. Lee, & Ihm, 1983; S.W. Lee, 1984) and extraction of conjunctive clause (P.Y. Lee, 1981).

Although languages in the world differ syntactically in the formation of relative clauses, universally a relative clause consists of the head and a restricting clause (Comrie, 1981). The definition of a relative clause therefore must describe the relationship between these two, as Comrie (1981:143) explains:

> The head in itself has a certain potential range of referents, but the restricting clause restricts this set by giving a proposition that must be true of the actual referents of the over-all construction.

From this viewpoint, Hwang's (1990: 382) reference is shared by other linguists (P.Y. Lee, 1990; I.S. Lee, & Ihm, 1983 and others) on the relative clause in Korean. According to this view, relative clauses are defined as 'all structures with [Clause + Modifying Ending] that precede the head noun when the head noun is coreferential with a deleted noun in the modifying clause'. Hwang further distinguishes relative clauses from complement clauses, which also have a [Clause + Modifying Ending] but there is no deleted coreferential noun in modifying clauses (Complement clauses will be discussed in detail in 2.7).

However, there are relative clauses which cannot be fitted into this definition, and also the [Clause + Modifying Ending] is somewhat ambiguous. Most attributive adjectives in Korean are in fact adjectival phrases as they are formed with the descriptive verb stem plus the modifying ending *–(u)n* which go through the same transformation as the relative clause. That is why attributive adjectives are claimed as relative clauses by Hwang (1990). This study will deal with this distinction in Chapter 3.

2.3 Head-final relative clause construction

One of the most noticeable syntactic characteristics we observe when comparing relative clauses between languages is the position of relative clauses with respect to the head noun. Observe example (2.2) again:

(2.2) [Youngswu-ka Peter-eykey cwu-n] **chayk**-ul ilk-ess-ta.
name-NOM name-to give-REL book-ACC read-PAST-END
'(I) read the **book** [that Youngswu gave to Peter].'

The clause *[Youngswu-ka Peter-eykey cwu-n]* is a relative clause, which precedes the head noun, *chayk* 'book', whereas in English the relative clause comes after the head noun. Although some linguists (Cook, 1968; Yang, 1975, cited in Suh, 1994:1185) have described the relative clause in Korean as a right-branching construction, their arguments have been considered by the majority of linguists as unsuitable for the characteristics of Korean (Suh, 1994). In the light of universal typology, it has become evident that Korean is not right-branching in the formation of the relative clause but belongs to the left-branching language group which includes Chinese and Japanese. Chomsky (1970) claimed that it is not necessary to go through each phrase structure to confirm whether a language belongs to the right or left-branching group because each language needs to be identified only once for their branching tendency for all phrases. Word order universals (Greenberg, 1966; Comrie, 1981; J. Hawkins, 1983; Keenan, 1985) predict that SOV languages are predominantly head-final whereby adjectives, genitives and relative clauses all precede the head noun. This is particularly true in Korean as all nominal modifiers, phrases and clauses precede the head as predicted by the general tendency of structural characteristics as outlined below (Comrie, 1981; J. Hawkins, 1988):

SOV: AN, GN, Rel N, Np. Postposition, Suffix
SVO: NA, NG, N Rel, Preposition
VSO: NA, NG, N Rel, Preposition, Prefix

(AN: Adjective-Noun, GN: Genitive-Noun, Rel N: Relative Clause-Noun
NA: Noun-Adjective, NG: Noun-Genitive, N Rel: Noun-Relative Clause)

Korean is one of 61% of SOV languages, which take a head-final (RelN) relative clause construction and the other 39% take a head-initial (Nrel) construction (J. Hawkins, 1983 cited in J. Hawkins and Cutler, 1988:284). In order to have an overall picture of the head-final and left-branching characteristics of Korean, the following section demonstrates the basic order of **Modifier + head** (Vennemann, 1974) construction in Korean to highlight the position of the relative clause.

2.3.1 Position of nominal modifiers

Nouns are used for subjects and objects in the sentence but often they are modified, and the modified nominal phrases and clauses are used for subjects and objects. The first category is nominal phrases that are usually formed with one or a combination of single word determiners that precede the noun:

- Demonstrative determinative: *i* (this), *ku* (it, that), *ce* (that)
- Numeral determinative: *han* (one), *twu* (two), *sey* (three), *chet* (first)
- Attributive: *say* (new), *hen* (old), *on* (whole), *oy* (sole), *ttan* (another)
- Interrogative determinative: *enu* (which), *weyn* (what), *mwusun* (what), *etten* (what kind)

The significance of examining determiners is the fact that words which belong to the category of attributive adjective, equivalent to adjectives in English, are very few in Korean. Instead, Korean has the descriptive verb and the modifying ending *-(u)n* is attached to the verb stem and functions as an adjective placed before the noun (AN) as in (2.3).

- Descriptive verb stem + *(u)n*

  (*-u* is inserted when the verb stem ends in a consonant.)

(2.3)	khuta.	→	cha-ka khuta	→	khu-n cha
	be big		car-NOM big		big-ATTR car
			'The car is big.'		'a big car'

The distinction between attributives and transformed adjectives is that attributives cannot be used for predicatives. Thus (2.4) is ungrammatical.

(2.4)	say	*cha-ka say	say cha
	new	car-NOM new	ATTR car
		for 'The car is new.'	'a new car'

On the other hand, clausal nominal modifiers such as adjectival clauses, relative clauses and noun complement clauses are made of descriptive verbs and/or processive verbs and their main function is a predicative role in the sentence (Suh, 1994; H.B. Lee, 1989). As far as the position of the adjective is concerned, Korean and most cases of English precede the head (AN – Adjective+Noun order) (Greenberg, 1974). Although English can have adjectives after the noun such as 'court martial' or 'envoy plenipotentiary' or heavy adjectival phrases like 'people fluent in three languages' (Comrie, 1981:90), these are marginal and have different semantic effects. We will discuss this in 3.4.2.

The genitive is another modifier considered in the universal typology for its linear order with regard to the head noun. In Korean, as predicted, the genitive particle *–uy* 'of' precedes the noun to form GN (Genitive+Noun order) and *–uy* may be intentionally or commonly omitted as in the following example:

- Noun determinative: Noun + *uy*

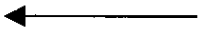
(2.5) chinkwu-(uy) tongsayng → chinkwu tongsayng
friend of brother friend's brother

In English the genitive construction can be constructed in two forms: the prenominal Saxon genitive, e.g. *the man's hat*, and the postnominal Norman genitive, e.g. *the roof of the house* (Comrie, 1981:91).

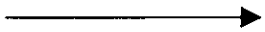
A further distinctive difference between Korean and English is in the construction of subordinate clauses as Korean is head-final and English head-initial. The following section examines the linear order of subordinate clauses with respect to the head noun to confirm the [Modifier + head] construction in Korean syntax.

2.3.2 Subordinate clauses precede the head noun

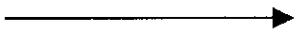
The subordinate clause is a major typological parameter for cross-language comparison (Comrie, 1981). There are two major subordinate clause types in Korean: the relative clause and the noun complement clause, both positioned to the left of the main clauses as in (2.6a) and (2.6b):



(2.6) a. **cip-ey ka-nun** oikwuk haksayngtul-un visa-ka epta. = Relative clause
home-to go-REL foreign students-TOP visa-NOM don't have
'The overseas students **who are going home** don't have a visa.'



b. cip-ey ka-nun sasil-i kipputa. = Noun compliment clause
home-to go-COMP fact-NOM pleased
'(I) am pleased about the fact **that I am going home**.'



The subordinate clauses in bold letters highlight a clear contrast between Korean and English in regard to branching directions. This particular characteristic of the language has been explained by the correlation between SOV word order with prenominal relative clause, and SVO word order with postnominal relative clause as to the word order constraints, which we have discussed in Chapter 1. Processing is easier when the subordinate clause is either at the beginning or at the end of the sentence. Centre embedding is difficult to process because it interrupts the flow of the main sentence and therefore tends to be avoided (Comrie, 1981).

2.3.3 Head-final relative clause and effects on information flow in discourse

In discourse, information usually flows discourse-chronologically from an earlier point (old) to a more recent point (new) (Kuno, 1978 in Kim-Alan & Shin, 1994; Fox & Thompson, 1990). As the relative clause precedes the head noun in Korean, the information about the head noun is presented before the identification of the head noun, and thus affects the flow of information in discourse (Hwang, 1998). Consequently the Principle of Information Flow is assumed to work differently in relative clauses in Korean than in English (Kim and Shin, 1994). For example, if the following sentence is translated into Korean using relative clauses in the same sequence, the order of events as presented in the sentence is completely reversed to

(c)(b)(a), because of head-final constraints (Hwang, 1998).

a. Slowly he walked along the aisle and up the steps to the choir,

b. where he handed the plate to the priest,

c. who blessed the gifts and then reverently placed them on the altar.

In order to present information with the same effect of revealing the information last, Korean uses separate sentences with a conjunctive word such as *kulentey* 'and then'. We will discuss this in detail in 3.6.

2.3.4 Adjacency to the head noun

The relative clause in English must be adjacent to the head noun and no constituents can come between the head noun and the relative clause as we can see from the following example (Braidi, 1999:89, 4.15a):

(2.7) The *bread* [that Terry baked] was good.
*The *bread* was good [that Terry baked].

Korean is the same, the relative clause *[Terry-ka kwuwu-n]* must be adjacent to the head noun, preceding *ppang* 'bread', any other order would be ungrammatical as in (2.8b):

(2.8) a. [Terry-ka kwuwu-n] ppang-i coh-ass-ta.
name-NOM bake-REL bread-NOM good-PAST-END
'The bread that Terry baked was good.'
b. *ppang-i [terri-ka kwu-n] coh-ass-ta.

However, in Korean, other nominal modifiers can be inserted between the relative clause and the head noun as in (2.9) but the equivalent English sentence would be ungrammatical.

relative clause + numeral + adjective + adjective + appositive + Noun

(2.9) [hocwu-eyse mana-n] + han + yeppuko + chincelha-n + kyopo + haksayng
Australia-in meet-REL + a + pretty + kind + overseas Korean + student
*A student pretty and kind overseas Korean whom I met in Australia'
for 'A pretty and kind overseas Korean student whom I met in Australia'

Korean can also include an adverbial clause such as *katun tongney-ey sal-ki ttaymwuney*, 'because we live in the same suburb' in the relative clause as in (2.10), which is ungrammatical in English:

(2.10) [wuli-nun **katun tongney-ey sal-ki ttaymwuney** selo chinha-n] iwuttul-ita
we-TOP same suburb-in live-Nom because each other close-REL neighbours –is
*'We are because we live in the neighbourhood close neighbours.'
for 'We are close neighbours as we live in the neighbourhood.'
(Suh, 1994:1187, [6])

When the relative clause is joined with other nominal modifiers such as determiners and adjectives, usually the relative clause is positioned first, and however long a nominal clause is when expanded, it all precedes the head noun as in (2.9). In left-branching languages like Korean and Japanese, a long constituent such as a relative clause precedes a short constituent whereas in right-branching languages like English, short precedes long. This is due to the need for the right peripheral recognition of the long constituent (J. Hawkins, 1994). It is also due to the need for processing efficiency, and we will discuss this in Chapter 4. As demonstrated, the construction of the relative clause is consistent with the left-branching, head-final characteristics of Korean.

2.4 Relativizers

2.4.1 The form of relativizers

The form of the relative pronoun is considered as an important factor in language universals since languages employ different mechanisms for the construction of relative clauses. Korean utilizes the relativizer, which is in the form of dependent morphemes and has the same function as relative pronouns joining the relative clause and the head noun. The significance of the relativizer in Korean is its additional semantic and grammatical roles of marking the tense and aspect. Consider the example (2.2) again:

(2.2) na-to [Youngswu-ka Peter-eykey cwu-**n**] chayk-ul ilk-ess-ta.
I-also name-NOM name-to give-REL book-ACC read-PAST-END
'I also read the book that Youngswu gave to Peter.'

There is no relative pronoun equivalent to 'that' but '***-n***' is a relativizer. *[Youngswu-ka Peter-eykey cwu-**n**]* is a relative clause that modifies the head noun *chayk* 'book'. The relativizer *'n'* is suffixed to the verb stem *cwu-* denoting the tense is past and the aspect of the relative clause is perfect/completion. This semantic function of the relativizer is particular to Korean. For instance, English distinguishes 'who', 'which' and 'that' according to animacy and denotes the case, whereas in French, the choice of 'qui' and 'que' is made in terms of whether it is subject or object of the relative clause. In Germanic languages, the distinction is made according to the gender and number of the head noun. Japanese, which has many similar syntactic characteristics to Korean, especially in pre-nominal relative clause construction, does not have anything that functions as a relative noun or relativizer, but the verb in the modifying clause is simply in finite (dictionary) form (Kuno, 1973; Matsumoto 1988b).

2.4.2 Tense and aspect markers encoded in the relativizer

The tense system is language specific as each language has its own ways of dealing with time in relation to event, speech and reference. The Korean tense system is viewed differently by linguists. Some (H.P. Choy, 1937; Ko, 1982) consider it to have three; present, past and future and some (H.M. Sohn, 1986; Suh, 1994; S.O.S. Sohn, 1995) view it as having only two; the past and non-past. The main argument for not having the future tense in Korean is that there is no difference in the verb for the present and future tense since the tense is usually denoted by a time adverbial as in (2.11) and (2.12), whereas the past tense is obligatory, clearly marked by the past tense marker *–ess-* in the matrix sentence as in (2.13):

(2.11) onul Peter-nun hakkyo-ey ka-nta. Present time
today name-TOP school-to go-END
'Peter goes to school today.'

(2.12) nayil Peter-nun hakkyo-ey ka-nta. Future time
tomorrow name-TOP school-to go-END
'Peter is going to school tomorrow.'

(2.13) ecey Peter-nun hakkyo-ey ka-ass-ta. Past time
yesterday name-TOP school-to go-PAST-END
'Peter went to school yesterday.'

Thus, it is the commonly held view that the Korean tense system is a binary system. There is a past tense, which is always overtly marked with *–ess-* and there is a non-past tense, which is null-marked accounted for the present and future. There has been debate among linguists whether *–n/-nun* which is used in the verb endings (*–nta* for a verb stem ends in a vowel and *–nunta* for a verb stem ends in a consonant) should be considered as the present tense marker or simply as a mood marker in the sentence, but this is still inconclusive (Suh, 1994).

Views on the modifying endings that are used for the relativizer and noun complementizer are more diverse. Some linguists argue that only *–n* and *–l* are considered as modifying endings and '*–n*' and '*–te–*' are tense markers (I.S. Lee & H.B. Ihm, 1983, 1992; Wang & Min, 1993). Lee and Ihm consider *–nun* to be the combination of '*n + un*' and the morpheme '*n*' appears only in the present tense form of processive verbs carrying the meaning of process, activity and continuity. They justify this view with the fact that '*–n*' is not selected for the present form of nominal modifier (adjective) when transformed from descriptive verbs, because the adjective expresses only a stative condition. Their position is that *–un* and *–ul* are lexical features with particular semantic characteristics; *–un* expresses something in the speaker's reality and *–ul* in irreality.

On the other hand, Kwen (1990) argues that the non-final ending '*–n*' cannot be analyzed as a morpheme in modern Korean, therefore it is appropriate to consider *–nun* as a separate morpheme thus making three modifying endings to denote the tense of processive verbs in which *–(u)n* denotes the past, *–nun* the present tense and *–(u)l* the future. H.S. Lee (1990) argues for four modifying endings, including *–ten* for retrospective ending, the reason being that modifying endings should form a syllable. He does not think that it is necessary to analyse as *te+n* and *n+un*, however, these morphemes appear to be limited in distribution therefore *–ten* and *–nun* are better

treated separately. Min (1991) also agrees that there are four relativizers.

The examples used above (2.11), (2.12) and (2.13) can be relativized as follows and we can notice the tense marked in the relativizers, *–nun* for the present and future and *–n* for the past tense are in different forms from the matrix sentences.

(2.11a) onul hakkyo-ey ka-**nun** Peter
today school-to go-REL name
'Peter who goes to school today'

(2.12a) nayil hakkyo-ey ka-**nun** Peter
tomorrow school-to go-REL name
'Peter who is going to school tomorrow.'

(2.13a) ecey hakkyo-ey ka-**n** Peter
yesterday school-to go-REL name
'Peter who went to school yesterday'

Apart from the tense marker, the relativizer is also used as an aspect marker. While 'tense relates the time of the situation referred to some other time, usually to the moment of speaking' (Comrie 1976:1) and generally distinguishes between present, past and future, 'aspects are different ways of viewing the internal temporal constituency of a situation' (ibid. p. 2). Comrie divides aspect into two concepts 'perfective' and 'imperfective' and defines them as follows:

> ... the term 'perfective' denotes a situation viewed in its entirety, without regard to its internal temporal constituency' (ibid. p. 12) thus, all parts of situations such as beginning, middle and end are presented as a single whole. On the other hand 'imperfective' denotes 'explicit reference to the internal temporal constituency of the situation, viewing a situation from within' (ibid. p. 24).

S.O.S. Sohn (1995) argues that tense is obligatory in the sentence but aspect is optional in Korean. Since the function of the relativizer is distinctive in expressing the tense and aspect, which has not been discussed in any other languages, the

following section briefly reviews tense and aspect as denoted by relativizers. With learners of Korean as an L2 in mind, the six readily recognizable relativizers are presented following K.D. Lee (1993) and Suh's (1994) comprehensive analysis on the subject. I will use the term 'future' for the purpose of a cross-linguistic understanding of tense.

2.4.2.1 Non-past/imperfective aspect: *–nun*

The relativizer *–nun* is only used with processive verbs and it usually indicates the present time reference at the time of utterance. Apart from the major *perfective/ imperfective* distinction of aspect, a *habitual/continuous* distinction (meaning "always do it, used to do it" versus "is doing it, was doing it") further supplements the imperfective aspect (Bybee 1985:101). The following example (2.14) shows the speaker is talking about what is happening in the present. Thus 'the objective situations and their verbal descriptions are coincidental' (K.D. Lee, 1993:411, 20a).

• Present event/action and speech act

(2.14) ceki taxi-lul ta-**nun** pwun-i ce-uy sensayngnim-i-si-ta
there taxi-ACC ride-REL person-NOM I-of teacher-is-HON-END
'The person who is riding into the taxi over there is my teacher.'

But it can also be used with a future time adverbial which indicates future time reference as in (2.15). At the time of the following utterance, the speaker is definite about the fact that the graduation will take place next year.

• Expresses future (Scheduled event with future time adverb)

(2.15) nanyeyn-ey colepha-**nun** haksayng-un icali-ey nam-usi-eyyo.
next year-in graduate-REL student-TOP here-in remain-HON-END
'Those who graduate next year please remain seated.'
(K.D. Lee, 1993:412, (22.b))

The relativizer *–nun* is also used for describing regular or habitual occurrences, such as studying and shopping as in (2.16).

• Regular or habitual actions in the present

(2.16) nay-ka ka-**nun** shopping centre-nun acwu kakkap-ta.
I-NOM go-REL shopping centre-TOP very close-END
'The shopping centre which I go to is very close.'

2.4.2.2 Past tense/Perfective aspect: *–(u)n*

The modifying ending *–(u)n* denotes that the aspect of the clause is perfect or complete. Whether the situation is perfective or imperfective is determined by the speaker, depending on how he/she views the whole situation. K.D. Lee (1993) explains that in order to see the whole situation from beginning to end, the speaker needs to be distant from the situation. That is why the perfective aspect is often used in describing past events. Consider the following examples to compare the situations denoted by the relative clauses:

(2.17) a. cikum Peter-ka mek-**nun** umsik
now name-NOM eat-REL food
'the food that Peter eats/is eating now'

b. ecey Peter-ka mek-**un** umsik
yesterday name-NOM eat-REL food
'the food that Peter ate yesterday'

c. akka Peter-ka mek-**ten** umsik
a while ago name-NOM eat-REL food
'the food that Peter was eating a while ago'

d. nayil Peter-ka mek-**ul** umsik
tomorrow name-NOM eat-REL food
'the food that Peter is going to eat tomorrow'

In (2.17a), Peter is eating the food now and he has not finished eating. In (2.17b) the food was already eaten so eating has been completed. In (2.17c), eating was continued, then stopped and Peter is not eating now. Thus the aspect is incomplete. In (2.17d), the eating has not yet been realized. The aspect is interpreted from the

viewpoint of the speaker. The time adverbial such as *ecey* 'yesterday' or *neyil* 'tomorrow' usually helps to disambiguate the situation. Since *–un* has the perfective aspect, *–(u)n* cannot be used with the past tense marker *–ess*. Therefore the following sentence is ungrammatical.

e. *nay-ka mek-**ess-un** umsik
I-NOM eat-PAST-REL food

The reason is that *–ess-* and *–(u)n* both have the semantic function of the perfective aspect. According to the 'principles of constraints on the combination of tense endings', when the grammatical elements have duplicating functions, only one element can appear (Kwen, 1990: 62). Thus, in this case, the ending *–(u)n*, which has the perfective aspect with a modifying ending, is selected. This can also offer a solution to S.O.S. Sohn's (1995:163) problem in her tense indexing in relative clauses using *–(u)n* as *–ess-n* in which she acknowledges that *–ess-n* is rarely actualized in phonetic form. The principle also applies to *–keyss-*, which has the semantic function of 'presumptive' (Suh, 1994). Therefore *–keyss-* and *–(u)n* cannot be combined together.

f. *nay-ka mek-**keyss-un** umsik
I-NOM eat-FUT-REL food

However, the retrospective aspect *–te* and the perfective aspect *–(u)n* can be expressed together denoting the imperfective view of a situation as seen in the above example (2.17c). This is discussed below.

2.4.2.3 Past tense/ Imperfective aspect: *–ten*

This aspect is viewed in the middle of the process, therefore the speaker cannot see the whole picture of the situation (K.D. Lee, 1993:410 (19) a & b). K.D. Lee illustrates the distinction between perfective and imperfective with the following examples. K.D. Lee explains that in (2.18a), the speaker looks at the year (1963) in its entirety, but in (2.18b), the speaker looks at the year as part of a large whole: that is his life. Living at the place was only a portion in his life.

(2.18) a. wuli-ka ku kos-ey sa-**n** hay-nun 1963-nyen-ita.
we-NOM that place-LOC live-REL year-TOP 1963 year-is
'The year we lived in there is 1963.'

b. wuli-ka ku kos-ey sal-**te-n** hay-nun 1963 nyen-ita.
we-NOM that place-LOC live-RET-REL year-TOP 1963 year-is
'The year we were living there is 1963.'

The relativizer *–ten* is freely used with verbs that denote repetitiveness. This implies continuity but cannot be combined with momentary verbs such as, *cwukta* (to die), *sicakhata* (to start), *kyeylhonhata* (to marry). When *–ten* is combined with descriptive verbs, it indicates that the status has continued up to a certain point as in (2.19) (Suh, 1994: 1181, [8] a.):

(2.19) ttattusha-**ten** nalssi-ka kapcaki chwu-eci-ess-ta.
warm-REL weather-NOM suddenly cold-become-PAST-END
'The weather which has been warm has suddenly become cold.'

2.4.2.4 Non-past/ Prospective aspect: *–(u)l*

When the speaker uses *–(u)l,* the situation is yet to be realized. In the following example, the speaker has not bought the car yet.

(2.20) nay-ka sa-**l** cha-nun hankwukcey-i-ta
I-NOM buy-REL car-TOP Korean made-is-END
'The car which I am going to buy is Korean made.'

The reference time is usually the time of utterance, but it can be another time when it is used with a time adverbial such as *ecey* 'yesterday' as in (2.21):

(2.21) ecey ka-**l** salam-i onul ka-ass-ta
yesterday go-REL person-NOM today go-PAST-END
'The man who was to go yesterday has gone today.'
(K.D. Lee, 1993:414, (27b))

2.4.2.5 Past tense/ Completion-imperfective: *–ess-ten*

The morpheme *–ess* denotes perfective and *–ten*, imperfective aspects and these two morphemes can co-occur in the case where 'a perfective situation is but a link in a chain of situations' as it is viewed from a wider perspective (K.D. Lee, 1993: 416). Compared to *–ten, -essten* emphasizes the completion of an activity in the past. In (2.22a), reading was continued then finished whereas in (2.22b) reading is not finished.

(2.22) ku-nun han sikan-tongan {a. ilk-**ess-ten**/ b. ilk-**ten**} chayk-uy nayyong-ul
he-TOP an hour-for read-REL read-REL book-of content-ACC
kiekha-nta.
remember-END
'He remembers the content of the book which he {a. has read/ b. has been reading} for an hour.'
(Suh, 1994:1183, <13>)

2.4.2.6 Past tense/ Prospective aspect: *–ess-ul*

This relativizer is a combination of the past tense *–ess-* and the prospective aspect *–(u)l* denoting that something would have been completed in the past.

(2.23) ku-i-nun pelsse i chayk-ul ilk-ess-ul salam-i-ta.
that-person-TOP already this book-ACC read-REL person-is-END
'He is the person who would have read this book already'
(Suh, 1994:1181, [5]a)

2.4.3 Tense in the relative clause and matrix sentence

It is generally regarded that in Korean the tense in the relative clause is not restricted by the tense in the matrix sentence as in English. As the following example (Suh 1994:1184, [1] and [2]) illustrates, the tense in the relative clause can take any form regardless of the tense in the matrix sentence.

(2.24)

Chelswu-nun meli-ey	a. ssu-**nun**/ssu-koiss-**nun**	mocha-lul betnunta/besessta
name-TOP head-on	b. ssu-**n**/sse-**ssten**	hat-ACC take off/took off
	c. ssu-ko iss-**essten**	

'Chelswu {takes off/ took off} the hat that he a. wears/is wearing.'
b. wore/had worn.'
c. was wearing.'

However, Suh explains that when the verb in the relative clause is a descriptive verb, the tense is somewhat restricted as in (2.25). This is due to the characteristic of the adjective, which has a tendency to be disconnected from the present when combined with the past tense in the matrix clause. In other words, unless something has happened, it is awkward to say that a girl was pretty but she is not pretty any more.

(2.25) na-nun elkwul-i mwuchek {a. yeppu-**n** / b. (?) yeppet-**ten**} yeca-lul
I-TOP face-NOM very pretty-REL pretty-REL girl-ATTR
manna-ass-ta.
meet-PAST-END
'I met a girl {a. who is pretty / b. (?) who used to be pretty}.

2.4.4 Use of relativizer

The relativizers – modifying endings used in the construction of relative clauses – are, however, not solely used for the relative clause. As noted earlier in this chapter, the nominal modifiers for the formation of relative clauses (2.26b) and noun complement clauses (2.26c) are exactly the same. Moreover, the modifier *–(u)n* is used for all three features including the adjective (2.26a):

(2.26) a. cak- **un** hakkyo (*–un* as nominal modifier)
small-ATTR school
'small school'

b. ecey mek-**un** umsik (*–un* as relativizer)
yesterday eat-REL food
'the food (which) we ate yesterday'

c. totwuk-ul cap-**un** sasil (*–un* as noun complimentizer)
thief-ACC catch-COMP fact
'the fact that (they) caught the thief'

This indicates the important form-meaning relationship between the features. This fact has been noted. It has been claimed that "adjectives, when they modify a following noun, are relative clauses in Korean" (Hwang 1990:56). However, it has not been clarified whether the changed word or clause is an adjective or relative clause when a descriptive verb is suffixed by *–(u)n*. An investigation into the syntactic and semantic characteristics of these two features is one of the main objectives of this study and will be presented in Chapter 3.

The following table is a summary of modifying endings applicable to the formation of adjectives, relative clauses and noun complement clauses.

Table 2.1 Summary of modifying endings
(Sources: Suh, 1994, H.B. Lee, 1989 and K.D. Lee, 1993)

Type of Verb / **Tense** / **Aspect**	**Non-past** **Imperfective**	**Past** **Perfective**	**Past** **Continuing/ Imperfective**	**Past** **Completion/ Imperfective**	**Non-past** **Prospective**	**Past** **Completion/ Prospective**
Processive Verbs (VS ends in a Vowel)	***-nun***	***-(u)n***	***-ten***	***-ass/ess-ten***	***-(u)l***	***-ass/ess-ul***
kata 'to go'	*ka-nun*	*ka-n*	*ka-ten*	*ka-ass-ten*	*ka-l*	*ka-ass-ul*
(VS ends in a Consonant)						
mekta 'to eat'	*mek-nun*	*mek-un*	*mek-ten*	*mek-ess-ten*	*mek-ul*	*mek-ess-ul*
Existential Verb	***-nun***		***-ten***	***-ess-ten***	***-(u)l***	***-ess-ul***
issta 'to exist'	*iss-nun*		*iss-ten*	*iss-ess-ten*	*iss-ul*	*iss-ess-ul*
Descriptive Verbs	***-(u)n***				***-(u)l***	
(VS ends in a Vowel)	***-n***		***-ten***	***-ass/ess-ten***	***-l***	***-ass/ess-ul***
ssata 'to be cheap'	*ssa-n*		*ssa-ten*	*ssa-ass-ten-*	*ssa-l*	*ssa-ass-ul*
(VS ends in a Consonant)	***-un***		***-ten***	***-ass/ess-ten***	***-ul***	***-ass/ess-ul***
cakta 'to be small'	*cak-un*		*cak-ten*	*cak-ass-ten*	*cak-ul*	*cak-ass-ul*
Copula (Equative verb)	***-n***		***-ten***	***-ass/ess-ten***		***-ass/ess-ul***
ita 'to be'	*i-n*		*i-ten*	*i-ess-ten*		*i-ess-ul*

From the table we see apparent rules that apply according to the verb types when suffixing modifying endings to the verb stem. In the construction of relative clauses, the type of verb plays a crucial role in determining the appropriate relativizer. Therefore the very characteristics of each verb are of central importance in determining either adjectival or relative clauses. Hence, verb types will be discussed in Chapter 3.

The relative pronoun in English is lexical and is positioned in the clause-initial phrase. According to Givón (1979:151), 'the relative pronoun serves a double function: It carries the case-marking of the deleted NP and also separates the head noun from the embedded sentence'. The relative pronoun with a case notification such as 'who', 'whom' and 'whose', signals that a relative clause is following. Omission of the relative pronoun is only allowed if the noun phrase is the object of the relative clause. The relativizer in Korean is obligatory. As it surfaces in the clause-final position, there is no other signal for registering the relative clause. Hence we can detect different processing principles involved in the acquisition of relative clauses in Korean, due to the form and position of the relativizer. This will be discussed in Chapter 4.

2.5 Presence of the resumptive pronoun

In English the resumptive pronoun is absent in the relative clause except, occasionally, in natural speech (Trarallo and Myhill, 1983). The following sentence is ungrammatical because the resumptive pronoun 'her' is left in the relative clause.

*The woman [whom you spoke to *her*] just left. (Braidi 1999:89)

In Korean, on the other hand, the resumptive pronoun in the relative clause is allowed in the genitive construction (J.B. Kim, 1998). This is also allowed in Japanese and Turkish (J. Hawkins 1994:44). In (2.27), the trace of *ku-uy* 'his' and in (2.28) *caki-uy* 'own' are left on the surface structure. The resumptive pronoun is used to indicate that the reference in discussion is already known. For example, *caki* 'oneself', *na* 'I' and *ku* 'he/she' or words in a similar category have their own semantic function. It has been argued that the grammaticality of the genitive relative clause is constrained by the head noun in which 'the clause modifying head noun should be in a conceptual or physical close relationship, that is they need to be

'inalienable' to each other' (J.B. Kim 1998:793). The retention of the resumptive pronoun in the sentence makes the relationship between relative clause and head more semantically transparent and thus makes processing easier (J. Hawkins 1994). The resumptive pronoun is discussed in more detail in chapter 5 when the results of the quantitative study on the acquisition of relative clauses in Korean are presented.

(2.27) **casin-uy** cha-lul Younghee-eykey pilyecwu-n Peter
oneself-of car-ACC name-to lend-REL name
'Peter who lent his own car to Younghee'

(2.28) **caki-(uy)** ilum-to ssu-ci mot ha-nun mwunmayngin-i tele issta.
onself-(of) name-also write-can't-REL illiterate-NOM sometimes is
'There are illiterate people who can't write their own names.'
(Suh, 1994:1186, [4])

2.6 Relativization of nominal elements

In relativization, as examined in Chapter 1, the NPAH has been one of the most important and frequently studied typological universals. Its validity has been examined in various languages and its relevance to L2 acquisition has been also tested in a number of languages. This is discussed in detail in chapter 5. The NPAH posits a scale whereby all languages must start at one point of the scale and we will subsequently know that the language will have the rest of the elements from that point upward in the formation of the relative clause. Korean has up to the fifth element on the NPAH scale, (the Genitive relative clause) but does not allow the last one (the Object of Comparison in the relative clause). The following examples show the relativization of each nominal phrase:

(2.29) a. Subject
hankwuk-ey ka-nun haksayng
Korea-to go-REL student
'The student who is going to Korea'

b. Direct Object

ecey manna-n haksayng

yesterday meet-REL student

'The student I met yesterday '

c. Indirect Object

nay-ka email-ul ponay-n haksayng

I-NOM email-ACC send-REL student

'The student to whom I sent an e-mail'

d. Object of Postposition

Peter-ka ilha-nun siktang

name-NOM work-REL restaurant

'The restaurant which Peter works'

e. Genitive

(casin-uy) cha-ka kocangna-n Peter

oneself-of car-NOM broke-REL name

'Peter whose own car broke down '

f. Object of Comparison

*Mary-ka ku-pota te ki-ka ku-n namca-TOC John-ita.

name-NOM he-than more hight-NOM tall-ATTR man-TOP name- is

For 'The man who Mary is taller than is John.' (Cook 1993:140)

We notice a few differences between Korean and English regarding the NPAH. Because (2.29f) is ungrammatical in Korean, we infer that Korean does not allow the relativization of the 'Object of Comparison'. When the 'Object of Postposition' is relativized, the postpositional particle is always deleted along with the preceding noun. In (2.29d), it is *siktang-ese* that is omitted. Whereas in English, prepositions must be shown either before the relative pronoun,

e.g. That's the factory in which I used to work.

or at the end of the relative clause,

e.g. That's the factory which I used to work in.

and when the preposition is stranded, the relative pronoun can be omitted.

e.g. That's the factory Ø I used to work in (Saunders, 1999:217).

Without postpositions, Korean avoids ambiguity as to whether the noun is source or goal, due to the lexical meaning of the verb as in (2.30) (Hwang, 1990:378, (9)):

(2.30) wuli-ka ttenao-n tongney
we-NOM leave-REL neighbourhood
'The neighbourhood we left from'

Relativization is also possible with an element that is neither subject nor object, but is a noun that describes time and location and used as an adverbial in the sentence (Suh, 1994, Hwang, 1990). For example,

(2.31) Peter-wa yaksokha-n ecey,
name-with promise-REL yesterday
'Yesterday when I had an appointment with Peter'

(2.32) Peter-wa yaksokha-n keki
name-with appointment-REL there
'The place where I had an appointment with Peter'

The genitive clause is not common in Korean but is grammatical with the resumptive pronoun in the relative clause as discussed in 2.4 (see examples in (2.27) and (2.28)). If the relative clause describes the characteristic property of the head noun, the subject can be genitivized (D.W. Yang, 1987:30).

Other than the traditional relative clause types that we have examined so far, there are odd types of relative clause; for example, the 'fact-S type' clause which involves certain head nouns such as *sasil* 'fact', *il* 'matter', *kyenghem* 'experience' *saken* 'incidence', etc in which the head noun is coreferential to or modified by the whole preceding clause as in the English construction 'the fact that ...'. There is also the so-called 'headless' relative clause, which has a defective noun as the head noun (e.g. *kes* 'thing, fact', *cwul* 'how to, assumed fact', *swu* 'method, possibility', *ci* 'whether', etc.) (H.M. Sohn, 1999:312). However, strictly speaking, these are noun

complement clauses and are distinguished from the relative clause by the fact that the head noun is not coreferential with but appositive of the relative clause (Suh, 1994).

One other relative clause type shows a reciprocal relationship between the relative clause and the head noun. This type of the relative clause usually engages the head noun denoting five senses or a trace (e.g. *huncek, cakwuk, palcachi*) (H.M. Sohn, 1999:312):

(2.33) na-nun kapcaki [koki kwup-nun] naymsay-lul math-ass-ta.
I-TOP suddenly meat bake-REL smell-ACC smell-PAST-END
'I suddenly smelled the smell of (somebody) broiling meat.'

2.7 Fact of distinction between the restrictive and non-restrictive relative clause

The distinction between restrictive and non-restrictive relative clauses is quite clear in English as restrictive relative clauses restrict the meaning of the head noun (eg. The man I saw yesterday left this morning) whereas non-restrictive relative clauses give additional information about the head noun (eg. The man, who (had) arrived yesterday, left this morning). Comrie offers the following definition:

> the restrictive relative clause uses presupposed information to identify the referent of a noun phrase, while the non-restrictive relative clause is a way of presenting new information on the basis of the assumption that the referent can already be identified (1981: 138-139).

In English, non-restrictive relative clauses are usually indicated by commas in written form and pauses or intonation in spoken language after the antecedent (Saunders, 1999). In Korean, there is no formal morphological or phonological device that distinguishes restrictive relative clauses and non-restrictive relative clauses: the semantic interpretation can only be drawn from the context. In the following examples, (Suh, 1994 p. 1187, [7] a. b.), it can be said that (2.34a) is non-restrictive and (2.34b) is restrictive, but there is no difference in the surface structure. Suh suggests that this is probably due to the lack of an article system in Korean.

(2.34) a. wuli-ka phwul-ki elyew-un mwuncey-ka mahnta.
we-NOM solve-Nom difficult-REL problems-NOM many
'There are many problems, which are difficult for us to solve.'

b. ku-kes-un nay-ka phwul-ki eleyw-un mwuncey-ita
that-thing-TOP I-NOM solve-Nom difficult-REL problems-is
'That is the problem which is difficult for me to solve.'

Some have argued that the distinction between the restrictive and non-restrictive relative clause is dependent on the head noun's specificity and definiteness: If the head noun is made specific or definite by using the determiner *ku* 'it or that', it usually is a non-restrictive relative clause (P.Y. Lee, 1981 cited in P.Y. Lee, 1998:507; H.S. Lee, 1990, Min, 1991). Along the same line, I.S. Lee and Ihm (1992) argue that when the head noun is a proper noun, *Koyu myengsa*, the relative clause is usually a non-restrictive clause. Because the head noun itself is already specific (H.S. Kim, 1994), therefore the relative clause has the function of adding information (H.S. Lee, 1990). In the following sentence the relative clause *hocwu salam-kwa kelhonha-n* 'who is married to an Australian' is only adding supplementary information about Younghee since the name Younghee already provides specific information.

(2.35) hocwu salam-kwa kelhonha-n Younghee-nun khi-ka khuta.
Australia person-with marry-REL name-TOP height-NOM tall
'Younghee, who is married to an Australian, is tall.'

In non-restrictive relative clauses, the information of additional meaning is always given by the speaker, which distinguishes them from restrictive relative clauses. Ultimately, in relative clauses that are derived from descriptive verbs, it is always possible to have restrictive and non-restrictive interpretations (I.S. Lee and Ihm, 1992).

(2.36) Chelswu-nun yeyppun kkot-ul sa-ass-ta.
name-TOP pretty flower-ACC buy-PAST-END
'Chelswu bought pretty flowers.'
(I.S. Lee and Ihm, 1992:276 (5) a)

Lee and Ihm explain that in (2.36), two meanings can be drawn. One is that *Celswu* bought only beautiful flowers, distinguishing these from other flowers, which makes it a restrictive relative clause. The other is that *Chelswu* bought flowers and to the

speaker, they are beautiful and this is a non-restrictive relative clause. The semantic difference between restrictive and non-restrictive relative clauses is more obvious when the sentence is changed to a negative (H.S. Kim, 1994:332):

(2.37) a. ttul-i nelb-un cip-ese sal-ko sip-ci anhta.
yard-NOM big-ATTR house-in live-want-not
'I don't want to live in a house which has a big yard.'

In (2.37a), negation is only made to *ttul-i nelb-un* 'yard is big' not to *cip* 'house' as a whole. On the other hand, in (2.37b), the negation only applies to *hakkyo* 'school' not to *haksayngtul-i iss-nun* 'which students are there'.

b. ku haksayngtul-i iss-nun hakkyo-lo tolaka-go sip-ci ahnta.
those students-NOM are-REL school-to back want-not
'I don't want to go back to a school which has those students.'

I.S.Yang (1972) claimed that there are some semantic characteristics in non-restrictive relative clauses that are better expressed as two coordinate clauses in Korean. For instance, (2.34a) is expressed in two sentences first as in (2.34c) and then joined by *–nuntey* to form a compound sentence as in (2.34d). We will examine the functional role of the relative clause including the role of *–nuntey* in Chapter 3.

(2.34) c. mwuncey-ka mahnta. kulentey phwul-ki eleypta.
problem-NOM (be) many but solve-Nom difficult
'There are many problems.' 'But they are difficult to solve.'

d. mwuncey-ka mah-untey phwul-ki eleypta.
problems-NOM (be) many-and solve-Nom difficult
'There are many problems and they are difficult to solve.'

However, the common view among linguists (Lee and Ihm, 1992; Hwang 1994; Suh, 1994; H.S. Lee, 1990 and others) is that it is not significant enough to make a distinction between restrictive and non-restrictive relative clauses in Korean. Particularly for learners of Korean as an L2, the distinction need not be included in

explanations. Nevertheless, teachers at least need to be aware of this fact.

2.8 Relative clause and complement clause

As the same modifying endings are used for the formation of both relative clauses and noun complement clauses, these two features look syntactically similar on the surface as both are embedded clauses, which precede the head noun. However, as stated above, with respect to the definition of the relative clause, the complement clause is different from the relative clause because it does not have a deleted coreferential noun in the modifying clause. In other words, the head noun cannot be included in the embedded clause. In the relative clause (2.38a), the head noun *chayk* 'book' is part of a modified clause as an object but in (2.38b), the head noun *sasil* 'fact' cannot be a part of the modified clause. In (2.38b) the head noun, *sasil* 'the fact' equals the complement clause, *ney-ka chayk-ul ilk-un* 'you read the book'. Thus, the complement clause is the content of the head noun and is called the appositive clause (Lee and Ihm, 1992; Wang and Min, 1993; Suh 1994).

(2.38) a. nay-ka ilk-un chayk-un cham caymiiss-te-la.
I-NOM read-REL book-TOP very interesting-RET-END.
'The book that I read was very interesting.'

b. ney-ka chayk-ul ilk-un sasil-i nolap-ta.
you-NOM book-ACC read-COMP fact-NOM surprising-END
'The fact that you read the book is surprising.'
(Lee and Ihm, 1992:270, (1) b)

The relative clause is optional since its basic function is to modify the head noun. The complement clause however, is essential in the formation of the grammatical sentence (Suh, 1994). In (2.38b), without the complement clause, *ney-ka chayk-ul ilk-un,* 'that you read a book' the main sentence *sasil-i nolapta* 'A fact is surprising.' cannot be a complete sentence.

Another significant difference between the two features is the relationship with the head noun in which relative clauses can take any nouns as in (2.39b) but complement clauses are restricted to take only certain types of nouns, such as *sasil* 'fact', *sayngkak* 'thought' that carries information usually expressed by the speaker

(Min, 1991; I.S. Lee and Ihm, 1992). (2.39a) is an example of such a construction.

(2.39) a. ku pwun-i si-lul ssu-nun sasil{/ket/?il/?sosik/?poto}
that person-NOM poem-ACC write-COMP fact{thing/matter/news/report}
-i allyecy-ess-ta.
-NOM be-known-PAST-END
'People got to know the fact that he writes poems.'

b. ku-pwun-i si-lul ssu-nun salam{siin, namca, yeca, kyoswu,
that person poem-ACC write-REL person{poet, man, woman, professor,
kaswu ...}ita
singer ...}-is
'He is the person {poet, man, woman, professor, singer...} who writes poems.'
Suh (1994:1191, [4] & [5])

In English, a clear distinction can be made for the complement clause since 'which' may not be used as a complementizer as in (2.40) and (2.41) (Comrie and Horie, 1992, cited in Hwang, 1996:145):

(2.40) The teacher knows [that(/*which) the student bought the book].
(2.41) The declaration/knowledge/fact [that(/*which) the student bought the book].

2.9 Summary

The construction of relative clauses in Korean is markedly different from English. The most significant characteristics are the head-final, left-branching direction and the form-function of relativizer. The head-final and left-branching direction of relative clauses is consistent with all determiners, adjectives and subordinate clauses that are congruent with the SOV typology. The relativizer, which is in the form of a dependent morpheme in the clause-final position, shows a unique function, which marks the tense and aspect on top of the universal function of the relative pronoun. This aspect has not been considered in studies of the acquisition of relative clauses. Relativization in Korean is possible for Subject, Object, Indirect Object, Object of Postposition and Genitive but not for Object of Comparison. In contrast to English,

the resumptive pronoun can be left in the genitive relative clause but postpositions must be deleted with coreferential nouns. The following table summarizes the characteristics of the relative clause in Korean in comparison with English.

Table.2.2 The Contrastive characteristics of relative clauses in Korean and English (Adapted from Hwang 1990:385)

English Relative Clause	***Korean Relative Clauses***
1. Head-initial	1. Head-final
2. Relative pronoun in RC initial position	2. Deletion of coreferential noun relativizer in RC final position
3. Preposition is left with relative pronoun	3. Postposition is deleted along with coreferential noun
4. Finite form of verb in RC; less nominalization	4. Nonfinite form of verb in modifying ending; more nominalization
5. Positional contrast with adjective, which is prenominal	5. Identical position with adjective respect to the head noun
6. Distinction between restrictive and nonrestrictive relative clauses	6. No syntactic or phonological distinction between restrictive and nonrestrictive relative clauses
7. Clearer distinction from complement clause; head noun is not required in CC	7. Similar to complement clause; both RC and CC have modifying endings, followed by head nouns
9. Genitive and Object of comparison may be relativized	9. Genitive may be relativized with some constraints; Object of comparison may not

Chapter 3 Form-function of adjectives and relative clauses in Korean

3.1 Introduction

As examined in Chapter 2, the construction of relative clauses in Korean involves the utilization of the relativizer, which is in essence one of a series of modifying endings in the form of grammatical morphemes. The modifying endings apply to the formation of three syntactic categories; namely, the adjective, the relative clause and the noun complement clause, which implies that a very close semantic relationship exists between these three features. In particular, the adjective and the relative clause are conceptually similar (Thompson, 1988; Croft, 1990) since they perform a very similar semantic function as (restrictive or appositive) modifiers of the head noun (J. Hawkins, 1994:269).

The distinction between the adjective and the relative clause is not clear in Korean as questions have been raised about their ambiguity (Hwang, 1990; Kim and Shin, 1994). Hwang (1996) claims that attributive adjectives are relative clauses in Korean. Then, are they the same semantically and functionally? At least in English, there is a word order difference between the adjective and relative clause as AN (Adjective + Noun) but NRel (Noun + Relative clause) which indicates the undeniable fact that 'the occurrence of formal elements tend to be inextricably tied to particular semantic effects' (Newmeyer 1998:44). In the case of Korean, both are head-finals as AN (Adjective + Noun) and RelN (Relative clause + Noun) in word order and share the structural resemblance in which attributive adjectives and relative clauses both go through transformations from 'predicative' to 'attributive' and 'restrictive' respectively. A clear explanation about form and meaning/function relationships between the adjective and relative clause in Korean is not yet available.

The form-function approach is based on the perspective of a combination of two views on grammatical forms: one view is that grammar is the way it is because of communicative functions that the language has to serve (Braidi, 1999) and the other is the functionalists' view of how particular semantic and pragmatic functions are encoded in grammatical forms (Givón, 1984; Halliday, 1985; Tomlin, 1990). Newmeyer (1998:44) has explained the form-function approach, which is particularly applicable to the analysis of the adjective and relative clause in Korean.

> First, the links between formal properties of grammar and their semantic and pragmatic functions are tight enough to preclude any significant mythological and or analytical 'parceling out' of form. Second, to a significant degree, the formal properties of grammar are motivated by functions that language carries out, in particular its function of conveying meaning in communication. And third, by means of integrating functional explanation with typological investigation, one can explain why certain grammatical features in the languages of the world are more common than others and why, for particular languages, the appearance of one feature often implies the appearance of another (Newmeyer 1998:18).

In this chapter, based on the typological functional approach, which essentially explains 'properties of linguistic forms in terms of their associated meanings' (J. Hawkins, 1988), I will clarify the form-meaning/function relationship between the adjective and the relative clause in Korean with particular focus on:

i) how Korean expresses the universal property concept
ii) what position the descriptive verb as a linguistic category occupies in the time-stable continuum in relation to the adjective and verb
iii) in what way adjectives and relative clauses share the same grammatical form in their formation
iv) what are the particular aspect of the form and meaning/function that distinguishes relative clauses from adjectives.

3.2 Types of verb and relativization

Since the relativizer is suffixed onto the verb stem within the relative clause and applies differently according to the types of verb, it is first necessary to review the verb types in Korean. The importance of the verb in language is stated by Lehmann (1978:9). As he concluded, 'the verb is the most characteristic segment of human language'. He reasons that the simplest kind of sentence can be made up solely of a verb and there is some scientific evidence which indicates that the dominant left hemisphere of human brain controls the utterance of verbs as well as the processing of information while the utterance of nouns is managed by the nondominant right hemisphere. He further asserts that it is imperative that linguistic typology should be concerned centrally with the verb and its construction. His observation could not be

more true for Korean, as the verb is the head of the sentence, the right most element of the Korean syntax (Kang, 1986; D.J. Lee, 1992). Korean is a prodrop language in which the subject of the sentence is often omitted and communication is possible without the subject or object in the sentence. This is partly due to a rich inflectional system in the verb, which provides information such as tense, aspect, mood but also the presence of the honorific marker in the verb or honorific verb from which the subject and object can be inferred. In the construction of relative clauses, the verb also plays a crucial role in determining the relativizer. Depending on whether the verb is of the processive, descriptive, existential or copula (equative) type, the verb stem takes different modifying endings.

The verb in Korean is largely divided into two categories according to semantic types: processive verbs which express actions and processes, and descriptive verbs which describe a state. Grammatical application differs accordingly. Martin (1954: 17) classified verbs on the basis of sentence ending selection and defines the processive verb statement ending *–nunta* and descriptive verb statement ending *–ta* as follows:

a) processive verbs lack the category of plain indicative assertive *–ta* (replacing it by the processive assertive *–nun/-nta*) ...
b) descriptive verbs lack the following paradigmatic forms: subjunctive forms (suggestion, command), and processive forms (processive modifier, processive assertive, processive adjunctive).

There have been different views on categorizing verbs in Korean. For instance, H.P. Choy (1937) treated the existential verb as a descriptive verb and some (Nam and Ko, 1985) classify the copula as a predicative particle. However, because of the particular characteristics of the existential verb, *issta* and distinctive functions of the copula verb, *ita,* it is generally accepted that it is better to have four verb types including these two (Suh, 1994). However, Martin's classification still maintains the fundamental distinction between verbs in Korean. The processive verbs and the existential verbs are distinguished from the descriptive verbs and the copula (equative) verb by being able to be inflected for imperative and propositive moods whereas descriptive verbs and the copula verb cannot. The other major difference is that the descriptive verb and copula cannot take any tense inflectional endings. In the

following section we examine characteristics of each verb type that determine the relativizer. Before we move on, it is important that we have a clear understanding of the terms used for explaining verbs. Comrie offers the definition that

> ... states are static, i.e. continue as before unless changed, whereas events and processes are dynamic, i.e. require continual input of energy if they are not come to an end; events are dynamic situations viewed as a complete whole (perfectively), where as processes are dynamic situations viewed in progress, from within (imperfectively) (1976:51).

3.2.1 The Processive Verb

Verbs that describe actions and processes belong to this category and there are two kinds of processive verb, intransitive and transitive verbs. The processive verb holds its distinctive position by the way it can combine with other constituents before and after the verb in the sentence (Suh, 1994). For example, the processive verbs can take an object (in this case, transitive verb) and certain types of adverbs such as *cal* 'well' and *chenchenhi* 'slowly' before the verb and can also be inflected in imperative and propositive forms in the verb final ending. But the most salient characteristic of the processive verb is its ability to be tense inflected. Consequently it takes all relativizers; *-nun, -(u)n, -ten, -ass-ten, -(u)l, -ass-ul.*

When processive verbs are relativised, it is relatively straight forward, because they are equivalent to English relative clauses, as in the examples below. Example (3.1b) shows that the honorific suffix *–si-* can be inserted between the verb stem and the relativizer.

(3.1) a. ka-nun haksayng
go-REL student
'the student who goes/is going'

b. ka-si-nun sensayngnim
go-HON-REL teacher
'the teacher who goes/is going'

In Korean, various verb suffixes such as tense, honorific, aspect and modal can co-occur between the verb stem and the final ending or modifying endings. Martin

(1963) presents the maximum possibility of seven sequence positions in the matrix sentence as below:

Verb stem	Status	Tense	Tense	Tense	Style	Aspect	Mood
pappu	(u)si	ess	ess	keyss	sup	ni	ta
busy	HON	PAST	ASP	SUP	IND	STMT	

'(You) must have been busy.'

Embedded clauses with processive verbs will be discussed in Chapter 4.

3.2.2 The Existential Verb

The existential verb, *issta* is the second most frequently used predicate except the verb *-hata* 'to do'. If we exclude 'Noun+hata' form, *issta* is the top of the frequency scale in all predicates (You, 1998), hence we see the importance of this verb in the Korean language and L2 acquisition studies. In Korean, the existential verb is treated separately because of its particular characteristics. Sometimes it behaves like a processive verb, taking the relativizer *–nun*; but sometimes it is more like a descriptive verb, in not taking *–(u)n* for the past tense. The existential verb is used for denoting two different meanings, existence and possession. Korean does not have any word that has the sole meaning of 'possession' (You, 1998), though the verb *kacita* is sometimes used for 'to have with *one*' or 'to carry' but it has limited usage. There are only three words in this category; *issta* is the basic form, *epta* is the antonym and, the honorific form is *kyeysita* (Suh, 1994; You, 1998). Although this verb generally describes a stative situation, when the subject is animate, the verb can be used as a processive verb as shown in the following examples (K.D. Lee, 1993:163):

(3.2) a. na-nun onul cip-ey iss-ta.
I-TOP today house-in is-END
'I will be home today.'

b. na-nun onul cip-ey iss-nunta
I-TOP today house-in is-END
'I will stay home today.'

The verb in (3.2b), *issnunta* indicates the subject's intention to stay home but the situation may change over the time, which makes this verb a processive verb, whereas (3.2a) denotes a stative situation. Because of this processive nature of the verb, D.J. Lee (1992) argues that *issta* should be divided into three categories based on the semantic interpretation; 'stay', 'exist' and 'have'.

When *issta* has the semantic interpretation of either 'existence' or 'possession', it has a different syntactic structure. As we can see from Table 3.1, the existential *issta* has a location adverb at the beginning of the sentence whereas possession is expressed by having an animate noun at the beginning of the sentence which indicates that semantic constraints are manifested as syntactic constraints.

Table 3.1 Summary of syntactic characteristics of *issta*

	Possessive *issta*	Existence *issta*
	NP1(Animate)–*eykey/nun* NP2–*ka issta*	NP1(Location) –*ey* NP2–*ka issta*
1. Head Noun for relativization	NP1–*eykey*	NP1–*ey* and NP2–*ka*
2. Honorific	*iss–usi–ta*	*kyeysita*
3. Resumptive	Bound resumptive pronoun	No
4. Adverb	Gradable adverb (eg. *kkoay* 'quite')	Descriptive adverb (eg. *cal* 'well')
5. Coactive	No	Imperative, Propositive, Promissory

Apart from the structural differences, with the possessive *issta*, only NP1 can be relativized as in (3.3a) whereas with the existential *issta*, both NP1 as in (3.4a) and NP2 as in (3.4b) can be relativized (Suh, 1994; You, 1998):

(3.3) na-eykey cha-ka issta : Possessive
I-to car-NOM have
'I have a car.'

→ a. cha-ka iss-nun na
car-NOM have-REL I
'I who's got a car.'

→ b. *nay-ka iss-nun cha

(3.4) chago-ey cha-ka issta :Existential
garage-in car-NOM is
'The car is in the garage.'

→ a. chago-ey iss-nun cha
garage-in is-REL car
'The car which is in the garage'

→ b. cha-ka iss-nun chago
car-NOM is-REL garage
'The garage where the car is'

Another difference becomes clearer when the *issta* is changed to an honorific verb to comply with the subject as *issusita* is used for possession and *kyeysita* for existence as in (3.5) and (3.6):

(3.5) apeci-kkey mal-i iss-usi-ta. (*kyeysita).
father-to horse-NOM have-HON-END
'My father has a horse.'

(3.6) apeci-kkeysenun oikwuk-ey kyeysinta. (*iss-usi-ta)
father-NOM overseas-in is (HON)
'My father is overseas.'

The verb *issta* takes a different adverb according to its intended meaning. For example, the possessive *issta* takes a gradable adverb such as *kkoay* 'a few' whereas the existence *issta* takes a descriptive adverb such as *cal* 'well' (Suh, 1994; You 1998). Observe the following:

(3.7) ku salam-un ton-i kkoay (*cal) issta.
that-person-TOP money-NOM a bit have
'He's got a bit of money.'

(3.8) halmeni-kkeysenun kohyang-ey cal (*kkoay) kyeysinta.
grandmother-TOP country-in well is
'My grandmother is well in my hometown.

Another significant difference is that the existencial *issta* can be coactive thereby taking imperative, propositive and promissory sentences like processive verbs as in (3.9a, 3.10a and 3.11a) but the possessive *issta* cannot as in (3.9b, 3.10b and 3.11b).

	Existential issta	**Possessive issta**
• Imperative		
(3.9)	a. ne-nun cip-ey iss-ela. You-TOP home-in stay-IMP 'You stay home.'	b. *ne-nun ton-i iss-ela. you-TOP money-NOM have-IMP 'Have some money.'
• Propositive		
(3.10)	a. onul-un cip-ey issca. today-TOP home-in stay-PRO 'Let's stay home today.'	b. *wuli ton-i iss-ca we money-NOM have-PRO 'Let's have some money.'
• Promissory		
(3.11)	a. na-nun onul cip-ey iss-uma. I-TOP today home-in stay-will 'I'll stay home today.'	b. *na-nun ton-i iss-uma. I-TOP money-NOM have-will 'I will promise to have some money.'

We have seen some of the salient characteristics of the verb *issta* and noticed that the existential verb, *issta* has much stronger verbal characteristics than the possessive *issta*, but the antonym, *epta* is more like a descriptive verb therefore cannot take a coactive form in any case.

3.2.3 Copula (equative verb)

The copula, *ita* 'to be; to be equal with' is categorized separately, but is treated the same as a descriptive verb because of its inability to take tense markers. Therefore, it cannot be used in imperative, propositive and promissory forms. The main function of the copula is predicating a complement and the antonym, *anita* 'not to be; not to be equal with' is the only other form belonging to this verb. A few different meanings can be derived from the copula, as listed below depending on its semantic relationship with the subject, but when it is relativized, the true meaning of the copula is appositive. That is why (3.13b) and (3.14b) are ungrammatical but (3.12b) and (3.15b) are grammatical (Suh 1994: 657-660):

• Appositive

(3.12) a. Peter-nun haksayng-ita. → b. haksayng i-n Peter
Peter-TOP student-is student-is-REL Peter
'Peter is a student.' 'Peter who is a student'

• Complement higher than subject category

(3.13) a. salam-un tongmwul-ita. → b. *tongmwul i-n salam
people-TOP animal- is animal-is-REL human
'Human is an animal.' 'Human who is an animal'

• Complement is a metaphorical symbol

(3.14) a. sikan-un kum-ita. → b. *kum-i-n sikan
time-TOP gold-is gold-is-REL time
'Time is gold.' 'Time which is gold.'

• Expressing the subject's attributes

(3.15) a. pangan-i engmang-ita. → b. engmang-i-n pang
room-NOM messy-is messy-is-REL room
'The room is messy. 'The room which is messy'

Sometimes *ita* is used for shortened idiomatic expressions and is often used as a shortened form of *–kwa katta* 'is the same as'. The reason that the composition [Noun + ita] often has an attributive function is due to the noun's attributive

characteristics, but for the same reason explained for (3.13b) and (3.14b), (3.16b) is ungrammatical since it is not appositive (You, 1998:24):

(3.16) Younghee-uy elkwul-un polumtal-ita.→b. *polumtal-i-n Younghee-uy
name-of face-TOP full-moon-is full-moom-is-REL name-of
elkwul
face
'Younghee's face is round (like a full-moon).' *'Younghee whose face is full-moon'

3.2.4 The Descriptive Verb

The presence of the descriptive verb in Korean is one of the significant differences from English. In English, the adjective is not only used for predicates, which is equivalent to the descriptive verb in Korean as we can see from (3.17) and (3.18) but also for attributives, which will be examined in detail in 3.3. The main function of the descriptive verb is the same as the processive verb in which it predicates the subject. But unlike English, it does not require the copula. While the processive verb is predicating actions and processes, the descriptive verb is predicating a state as in (3.17a) or an attribute/property as in (3.18a):

(3.17) a. nalssi-ka cohta.
weather-NOM nice
'The weather is nice.'

b. *nalssi-lul cohta.
weather-ACC nice

(3.18) a. cha-ka pissata.
car-NOM expensive
'The car is expensive.'

b. *cha-lul pissata.
car-ACC expensive

One of the salient characteristics of the descriptive verb is that it cannot take an object, thus (3.17b) and (3.18b) are ungrammatical. The descriptive verb can provide a semantic description of the subject only. The descriptive verb is largely divided into two categories, subjective and objective adjectives, but we will not be concerned here. The characteristics of the descriptive verbs become more obvious when we discuss them with attributive adjectives in next section.

3.3 The Descriptive Verb and Attributive Adjective

3.3.1 Property concepts and descriptive verbs

Regarding the adjective, Dixon (1977:20) raised an important question, asking how languages with either no adjective class at all or only a small non-productive minor class of adjective express concepts that are expressed through adjectives in languages like English, which do have this major class. To answer his question, Dixon (1977) devised the seven universal types of adjective based on semantic, syntactic and morphological criteria to see how other languages express these concepts. The finding was that "All languages appear to have Noun and Verb but some lack a major class Adjective." (p. 28).

Based on Dixon's seven types of adjectives Thompson (1988) proposed the notion of a 'Property Concept'. A word that expresses one of these concepts is called a 'Property Concept Word'. After examining some forty languages, she came to the conclusion that "whether or not there is a category of Adjectives, the words expressing Property Concepts tend to fall into categories which either share many properties with the class of Nouns, or many properties with the class of Verbs" (p. 169). Korean belongs to the category in which only few words are inherently categorized as adjectives as below:

say 'new' *hen* 'old'
on 'whole'
ttan 'another'
oin 'left' *palun* 'right'
oi 'sole'
yeyt 'olden time'
mayn 'nothing but', 'the very'

And there are a few words that originated from the Chinese such as:

swun 'pure' *cap* 'mixed'

The major characteristic of these attributes is that these words cannot be used as a predicative. In place of adjectives, Korean has descriptive verbs that change to nominal modifiers by suffixing *–(u)n* to the verb stem to function as attributive adjectives. The main function of the descriptive verb is its predicative role without the copula *ita* 'be', and in this, it is similar to the processive verb. The attributive

function is available only after the descriptive verb is transformed into a nominal modifier suffixed by *–(u)n* , as illustrated in the following examples:

• Descriptive verb: khuta 'to be big'

(3.19) cha-ka khuta → khu-n cha
car- NOM big big-ATTR car
'The car is big.' 'a big car'

• Descriptive verb: cakta 'to be small'

(3.20) cha-ka cakta → cak-un cha
car-NOM small small-ATTR car
'The car is small' 'a small car'

-u is inserted when the verb stem ends in a consonant.

Japanese also has adjective verbs that are used predicatively but they can be nominal modifiers without changing the form, using the same sentence final endings (Kuno, 1973). Table 3.2 demonstrates that most universal adjective types are expressed as descriptive verbs in Korean. An exception is an adjective *'say'* (new).

Table 3.2 Dixon's universal adjective types (Dixon, 1982:16)

1. DIMENSION –	big (khuta), little (cakta), long (kilta), wide (nelpta)
2. PHYSICAL PROPERTY-	hard (ttakttakhata), heavy (mwugepta), smooth (maykkunhata)
3. COLOUR –	blue (phalahta), white (huita)
4. HUMAN PROPENSITY –	jealous (ciltwuhata), happy (hayngbokhata), clever (ttokttokhata), generous (negulepta), proud (calangslepta)
5. AGE –	new (say), young (elita), old (nulkta)...
6. VALUE –	good (cohta), bad (napputa), pure (swunswuhata) delicious (masissta)...
7. SPEED –	fast (ppaluta), slow (nulita), quick (ppaluta)...

It is obvious that for the same grammatical function, different linguistic categories are used for each language. In the following section we examine how we can classify these linguistic categories cross-linguistically.

3.3.2 Time-stability and linguistic category

Givón (1979:266) made an insightful observation on categorizing the linguistic category using the interesting concept of 'time stability' to define verbs, nouns and adjectives. He defines the concept of 'time' as:

(17) THE TIME-STABILITY CRITERION FOR ENTITIES:

An entity x is identical to itself if it is identical only to itself but not to any other entity (y) at time a and also at time b which directly follows time a

(Givón, 1979:320 bold emphasis added).

He suggested that the following word-classes seem to be applicable cross-linguistically:

1. Phenomena which do not tend to change their identities over time tend to be lexicalized as *nouns*; they are thus considered *entities*.
2. Phenomena which change rapidly over time tend to be lexicalized as *verbs*. That is they are coded as *events-actions*.
3. Phenomena which change over time at a certain intermediate rate are those which have the highest potential of lexicalizing as *adjectives*; that is, they are considered as *states*.
4. Among states, more *permanent-inherent* states (size, shape, color, goodness-badness, taste, smell, texture) are more likely to pioneer the class "adjective," while the more *temporary- contingent* states (*hot, cold, angry, sad, sick, broken, bent, etc.*) may either remain (stative) verbs or are late to move into the "adjective" class.

He later refined his statement, further conceptualizing it in the scale of the universe and said:

> 'Experiences ....which stay relatively *stable* over time ...tend to be lexicalized in human language as nouns..... At the other extreme of the lexical phenomenological scale, one finds experiential clusters denoting *rapid*

changes, in the state of universe.... languages tend to be lexicalized them as verbs'. .... Adjectives occupy 'the middle of the time-stability scale' (Givón, 1984: 51-52).

This notion was challenged by Thompson (1988:172), questioning the relevance of the category adjective placed in 'the middle of the time-stability scale'. Thompson disagrees on two grounds; first, Dixon's seven types of adjective do not appear to be 'the middle of the time-stability scale' except possibly SPEED; and second, there is the possibility of making the wrong prediction about a particular set of morphosyntactic facts.

In the case of Korean, the category of descriptive verb indeed exhibits the characteristics that are more time-stable than processive verbs. Moreover, as Thompson accurately stated "thus, as a subclass of Verbs, Property Concepts often exhibit morpho-syntactic evidence of their *stativity*, their greater time-stability when compared to prototypical Verbs; they are often constrained not to occur with certain tense-aspect morphemes, for example" (1988:173). In Table 3.2, presented above, we can see Thompson's point that descriptive verbs cannot take the present tense final ending *–nunta* as in (3.21), the modifying ending *–nun* as in (3.22) and some cases ireallis *–(u)l* as in (3.23) or any other tense inflectional endings such as the present progressive ending *–ko issta* 'be ---ing' as in (3.24):

(3.21) *nalssi-ka coh-nun-ta.
weather-NOM good-Pre-END

(3.22) *nalssi-ka coh-nun cwumal
weather-NOM good-REL weekend

(3.23) *?nalssi-ka coh-ul cwumal
weather-NOM good-REL weekend

(3.24) *nalssi-ka coh-ko issta
weather-NOM good-be-ing

In Givón's (1979:266) statement, No. 4 describes exactly the status of the descriptive verb in Korean. As pointed out earlier, words 'in the permanent-inherent states' are only a handful, very limited in Korean. It is the second category, 'the temporary-contingent states', where the descriptive verb fits in because they change the state of property over time. For example, *ssata* 'cheap' or *alumdapta* 'beautiful' can change the character or quality over time to become more expensive or not so beautiful. However, when the descriptive verbs are changed to nominal modifiers attached by *–(u)n* and function as attributive adjectives, then they are more time stable than descriptive verbs. Because in *ssa-n umsik* 'cheap food', *ssa-n* describes a stable, fixed state that the food is identified as cheap.

An important point to note here is that the verbal inflection in Korean enables it to change the state of a word from the time stable status to the rapidly changing state. In other words, the linguistic category can be changed from the descriptive verb to the processive verb and vice versa. For example, Givón regards size as 'in the permanent-inherent state' but in Korean, size is described by descriptive verbs, which means in 'the temporary contingent state'. The descriptive verb *khuta* 'to be big' can be inflected by combining with the auxiliary verb *–a,e cita* and then changed to a processive verb *khecita* 'to become big' in 'the rapidly changing state'. Consequently, the adjective *khun* is made up of the verb stem *khu-* plus the modifying ending *–(u)n* but *khecita* is now a processive verb and therefore takes the relativizer differently for instance, *–nun* for the present tense. This perhaps can explain Thompson's concern over making the wrong prediction on linguistic category in relation to 'time stability'.

Haiman (1983:816) noted that 'linguistic categories may be derived from, and ultimately may be similar to, conceptual categories'. As we have seen, Givón (1979) used 'time' as an experiential criterion to define "individual entity" and explained the position lexical categories verb, adjective and noun occupy in the time continuum. Givón's concept of time has also enabled us to consider how the descriptive verb in Korean takes up its place in the time-stability continuum of the nouns-adjectives-verbs category. In considering the characteristics of the descriptive verb that we have examined, I propose that the Korean descriptive verb belongs to the category between the verb and adjective in Givón's time-stability continuum as in Table 3.3.

Table 3.3 Linguistic categories applied to Givón's time-stability continuum

	Noun	**Adjective**	**Descriptive Verb**	**Verb**
TIME				
	no change	intermediate time-stability	temporary time-stability	rapid change
CONCEPTS				
	permanent entities	states	temporary states	event actions
QUALITIES				
	concrete	permanent	transitional	less concrete
	spatial deixis	limited aspect	limited tense & aspect	time deixis tense & aspect

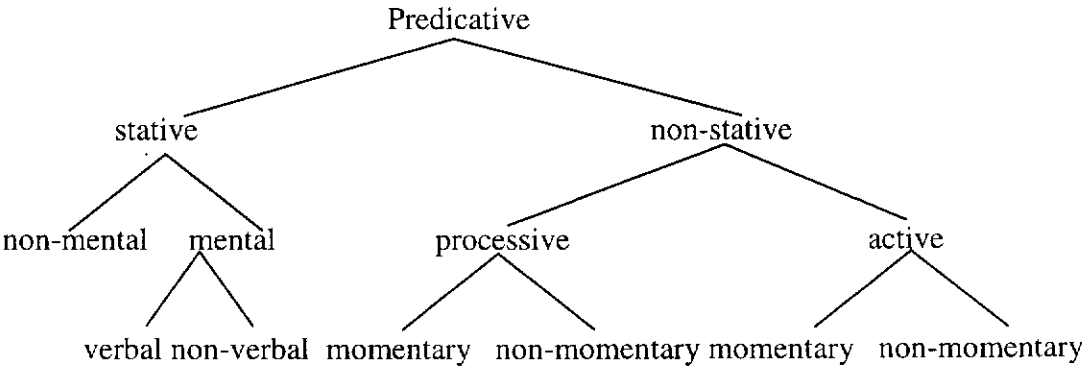
We can further confirm the status of the descriptive verb in Croft's syntactic categories. Croft (1991) proposed the prototypical semantic and pragmatic properties of noun, adjective, and verb. In his categorization, different characteristics are clearly presented between adjective and verb as in Table 3.4. I propose again here to place the descriptive verb in between the adjective and verb, where its semantic class is property, stative in state and gradable as the adjective. The differences are that the pragmatic function is predication and persistence is not persistent but transitory and the valency is the same as the adjective.

Table 3.4 Prototypical correlations of syntactic categories (from Croft 1991: 55, 65 in Newmeyer 1998:172) with the Descriptive Verb added

	Syntactic category			
	Noun	Adjective	Descriptive Verb	Verb
Semantic class	Object	Property	Property	Action
Valency	0	1	1	≥ 1
Stativity	State	State	State	Process
Persistence	Persistent	Persistent	Transitory	Transitory
Gradability	Nongradable	Gradable	Gradable	Nongradable
Pragmatic function	Reference	Modification	Predication	Predication

Croft notes the difficulty of setting up the prototypicality scale for verbs. However, it is quite clear, as Newmeyer (1998:173) points out, that 'causative active verbs carrying out the pragmatic functions of predication are the most prototypical, while nonactive verbs, including 'pure' statives and psychological predicates are less so' which confirms the placement of the descriptive verb in the prototypical correlation of syntactic categories. Suh (1994) adopted Chafe's (1970) concepts and methodology on the analysis of the semantic structure of the verb in English and presented a chart, which shows the semantic characteristics of verbs in Korean. The chart displays similar categorization of verbs but without explanation about correlations.

Figure 3.1 Semantic characteristics of predicates in Korean (Suh, 1994:529)



Another significant difference between Korean and English in regard to the markedness of syntactic category types is that in English, attributive adjectives are unmarked (eg. happy) and to be a predicative, it has to have the copula 'be'. On the other hand, in Korean the descriptive verb used for predicative (eg. *kipputa* 'be joyous') is unmarked but to be attributive it needs to take a noun modifier *–(u)n* and change to *kippun*. However, even these adjectives change linguistic categories by the derivational morphology, there are no major semantic changes across classes of concepts and grammatical functions (Croft, 1990). Adopted from Croft's, Table 3.5 shows the Korean syntactic categories with morphological changes.

Table 3.5 Korean derivational morphology indicating markedness of syntactic category types (Adopted from Croft: 1990: 142, Table 6.2)

	Reference	Modification	Predication
Objects	**Unmarked nouns** kay 'dog'	Genitive kay-uy 'dog's' compounds	Predicate nominals kay-(i)ta 'be a dog'
Properties	Deadjectival nouns kippu-m 'joy'	Atributive adjectives kippu-n 'joyous'	**Unmarked Predicate** kippu-ta 'be joyous'
Actions	Nominalizations tali-ki 'running', 'to run' Complements tali-nun Infinitives, gerunds tali-m	Participles, tali-n relative clauses tali-nun	**Unmarked verbs** tali-ta

3.3.3 Form-function of *–(u)n*

So, what is happening when descriptive verbs are transformed into attributive adjectives? What does the modifying ending *–(u)n* do semantically and functionally? From Givón's and Croft's linguistic categorization, we can notice two important changes occurring: one is that the pragmatic function changes from predication to modification and coincidentally the state changes from temporary time-stable to time-stable. How is this possible? Recall that K.D. Lee (1993) views *–(u)n* as the perfective aspect marker, which seems to be the only accurate observation regarding this morpheme. However, he applies this only to embedded sentences and processive verbs and does not extend it to the formation of attributes which are derived from the descriptive verbs. He views that 'The adjectives [He meant descriptive verbs] in Korean cannot appear in the perfect aspect, because they do not describe a process with an end point and, as they already describe the existence of state …' (p. 177). My argument is that the state of the descriptive verb is not time-stable, it is in the temporary time-stable state, it becomes the time-stable state of the attributive adjective by suffixing the modifying ending *–(u)n* which is the same morpheme used

for the relativizer with perfective aspect meaning. In (3.25a), the descriptive verb *copta* 'be narrow' is a predicate of the subject *kil* 'road' and it is in a transitory state.

(3.25) a. kil-i copta.
road-NOM narrow
'The road is narrow.'

b. cop-un kil
narrow-ATTR road
'a narrow road'

The semantic interpretation that we can draw is that in (3.25a), the road is narrow but it is the observation of the speaker at the point of utterance. It is possible that another time or other parts of the road might not be narrow. Therefore it is a fragmented view. On the other hand in (3.25b), the speaker views the road as a whole, and he identifies the whole road as a narrow road. Comrie clarifies that the perfective form indicates 'all parts of the situation are presented as a single whole' and makes a contrast with 'a perfective form [which] often indicates completion of a situation ... imperfective indicates a situation in progress' (Comrie 1976:18-19).

Bolinger's (1967) work on the adjective in English is also helpful in understanding the semantic and functional differences between the descriptive verb and attributive adjectives in Korean. In English, the form is the same whether the adjective is used as a predicate as in (3.26a) or an attribute as in (3.26b):

(3.26) a. Ann is beautiful.
Ann-un alumtapta.
name-TOP beautiful

b. beautiful Ann
alumdawu-n Ann
beautiful-ATTR name

According to Bolinger, English [be + adjective] form, which is equivalent to the descriptive verb in Korean, is potentially ambiguous. Changing its position from predicative (NA) to attribute (AN) can disambiguate the situation. Take his example, *The tools are handy* is ambiguous but in *the handy tools,* 'handy' has a more definite meaning such as the way it is made or the convenience of the usage (Bolinger 1977:18). He explains that the adjective in the attribute position is different from one in the predicate position because they such adjectives tend to reject the temporary and occasional state, thus making a more time-stable state in order to be able to characterize the noun. The principle and logic are much the same as we have examined in the light of Givón's time-stability and Croft's prototypical correlations

of syntactic categories. Thus, the grammatical morpheme *–(u)n* is an aspect marker which has the function of modifying the noun and the meaning of perfective state, a more permanent state. As aspect refers most exclusively and directly to the action or state described by the verb, *–(u)n* is used for both relative clauses and attributive adjectives (Bybee, 1985:21). It is worthwhile to reiterate Givón's (1979:321) statement regarding the adjective:

> Although some languages do not have the adjective class, and concepts corresponding to our adjectives are found in either the noun or verb lexicon, when a language does have a class of adjectives, its properties are highly comparable cross-language. Chiefly, adjectives have a reduced or aborted tense-aspect morphology, as compared to verbs. They usually require the "support" of a copula in order to express past and future tenses, and in a number of other morphological ways they stand between nouns and verbs.

If we revise the examples used for illustrating the fact that *–(u)n* is used for three different linguistic categories, we can find common semantic functions. As explained in (2.26a), when the descriptive verb *cakta* 'to be small' is suffixed by *–(u)n,* it has the perfective aspect therefore it is in a more time-stable state, as if *–(u)n* is used as a time-stablizer. Similarly in (2.26b), when the processive verb *mekta*, 'to eat' is suffixed by *–(u)n*, it also has perfective aspect but being a processive verb, it means the action is completed. Thus at the point of utterance the action belongs to the past. That is why *–(u)n* with processive verbs is regarded as marking the past or past tense with the perfective aspect. Along the same line with (2.26a), (2.26c) can be explained by the fact that the state of the library is small as a permanent, more time-stable state. But in (2.26d), if we use a processive verb *citta* 'to build' and suffixed by *–(u)n*, then the perfective aspect denotes that the action 'building' has been completed, if the speaker is talking about it now, the action took place in the past. As K.D. Lee (1993:403) notes 'whether a given situation is represented as perfective or imperfective is not determined by the situation itself but by the speaker'.

(2.26) a. cak- un hakkyo (*–un* as nominal modifier)
small-ATTR school
'small school'

b. ecey mek-un umsik (*–un* as relativizer)
yesterday eat-REL food
'the food (which) we ate yesterday'

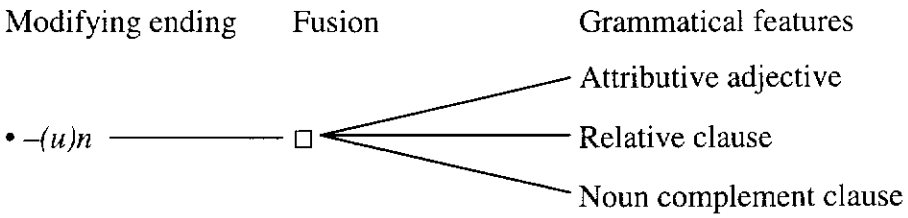
c. tosekwan-i cak-un sasil (*–un* as noun complimentizer)
library-NOM small-COM fact
'the fact that the library is small'

d. saylo ci-un tosekwan (*–un* as relativizer)
newly build-REL library
'the library which is newly built'

As we have examined in 2.3 on Relativizers, thus far there has not been any single consistent explanation about the modifying ending *–(u)n*. The common views have been that when *–(u)n* is used with the descriptive verb, it denotes the present tense and with processive verbs the past tense. Wang and Min (1993:253) pointed out that having two different meaning/functions for the same grammatical element makes it difficult to give a consistent logical explanation. S.O.S. Sohn, (1995) analyzed *–(u)n* as a combination of two morphemes as *–ESS-n*, rather than *–ESS-nun* or *–ESS-un* and interprets the meaning as past tense with the perfective aspect. But this is an awkward analysis, as she admitted, and has a residual problem because *–ESS-n* is rarely actualized in phonetic form. Even where one grammatical form has more than one function, each grammatical element should have one basic prototypical meaning from which inferential, secondary meanings can be derived (Comrie, 1976; K.D. Lee, 1993).

Thus, I propose the form-meaning/function of the modifying ending *–(u)n* has a multitude of functions for the formation of attributive adjectives, relative clauses and noun complement clauses with a single prototypical semantic explanation which is the perfective aspect as below:

Figure 3.2 Functions of grammatical morpheme *–(u)n*



Form	**Syntactic category**	**Function**	**Meaning**
Grammatical morpheme *–(u)n*			Perfective aspect
Descriptive verb + *–(u)n*	Attributive adjective	modifying	permanent state
Processive verb + *–(u)n*	Relative clause	restricting	completion of action or process

Fusion does not occur with any adjacent lexical elements rather, 'the process depends upon the relatedness or relevance of the semantic notions in question' and 'their ability to form a coherent semantic structure' (Bybee, 1985: 41).

The most important point to note here is that the semantic interpretation of the verb with the perfective aspect is dependant on the verb type. For instance, with the descriptive verb, it denotes a more permanent, time-stable state, whereas with the processive verb, completion of action or process. Let us apply this argument to the existential verb and the copula verb to support the claim. As shown in 3.2.2 the existential verb has characteristics of both processive and descriptive verbs. The verb, *issta* has difficulties with suffixing the perfective aspect *–(u)n,* this is due to the inherent characteristics of the existential verb 'being' as an entity, in which it is not describing a state like the descriptive verb nor expressing a course of action like the processive verb but a unique status of 'existence'. Even with the possessive *issta* verb, the true meaning is that 'something exists with someone'. If we change the examples used in 3.2.2 existential verbs to past tense, then we can see whether they can take *–(u)n.*

3.3-1) na-eykey cha-ka iss-ess-ta : Possessive
I-to car-NOM have-PAST-END
'I had a car.'

→ c. cha-ka iss-ess-ten na *c'.cha-ka iss-un na
car-NOM have-PAST-REL I
'I who had a car.'

3.4-1) chago-ey cha-ka iss-ess-ta :Existential
garage-in car-NOM is-PAST-END
'The car was in the garage.'

→ c. chago-ey iss-ess-ten cha *c'. chago-ey iss-un cha
garage-in is-PAST-REL car
'The car which was in the garage'

→ d. cha-ka iss-ess-ten chago *d'. cha-ka iss-un chago
car-NOM is-PAST-REL garage
'The garage which car was'

(3.6-1) apeci-kkeysenun oikwuk-ey kyey-si-ess-ta
father-TOP overseas-in stay-HON-PAST-END
'My father was overseas'

→ a. oikwuk-ey kyey-si-ess-ten apeci b. oikwuk-ey kyeysi-n apeci
overseas-at stay-HON-PAST-REL father overseas-at stay-REL father
'My father who was overseas' 'My father who is staying overseas'

3.6-2) Peter-nun oikwuk-ey iss-ess-ta. : Stay
name-TOP overseas-in stay-PAST-END
'Peter was overseas.'

→ a. oikwuk-ey iss-ess-ten Peter *b'. oikwuk-ey iss-un Peter
oversea-in stay-PAST-RET-REL Peter
'Peter who was overseas'

All the above examples show that when *issta* is suffixed with the perfective aspect –*(u)n*, the sentence is ungrammatical. Only the honorific form, *kyeysita* seems to take

–(u)n. This peculiar behaviour of *kyeysita* is explained as a recently developed language trend (Suh, 1994: 647-8). In all the above ungrammatical clauses, the correct relativizer should be *–ten* or *–essten* which denotes imperfect aspect. It shows the very nature of the existential verb, which cannot take the perfective aspect, because it can only 'exist' or 'not exist'. Suh (1994) regards this particular aspect of Korean language as unique and takes pride in the fact that it reflected the concept of 'existence', 'state' and 'action' separately in the language.

Now we take the copula, *ita* with the modifying ending *–(u)n*. Recall that the copula is treated in the same way as the descriptive verb. Thus, in (3.27) the status is perfective which means the identity is in a time-stable state, permanent as a 'doctor'.

(3.27) uysa i-n chinkwu
doctor is-REL friend
'a friend who is doctor.'

3.4 Syntactic and semantic distinctions between adjectives and relative clauses

3.4.1 Property concepts and relative clauses

Now we turn to the intriguing question, which I raised earlier, "Are adjectives and relative clauses the same?" The striking syntactic similarities between adjectives and relative clauses in Korean has caused some to argue that there is not much difference between the formation of attributive adjectives and verbs with relative clauses. Therefore some argue that when adjectives modify a following noun they are relative clauses in Korean just like processive verbs (Hwang 1990:56; H.M. Sohn, 1999:314). Collier-Sanuki also confirmed her hypothesis that 'relative clauses and adjectives belong to the same cross-linguistic category in Japanese and that relative clauses compensate for a lack of adjectives expressing appropriate concepts' (Collier-Sanuki 1993:89). Table 3.6 shows that some property concept words expressed in relative clauses in Korean are almost identical to the Japanese examples given by Collier Sanuki. (p. 92)

Table 3.6 Property concept words in relative clauses in Korean

1. Dimension	[ki-ka khu-n] salam height-NOM big-ATTR person 'a person whose height is high' = tall person
2. Physical property	[nwun-i khu-n] salam eyes-NOM big-ATTR person 'a person whose eyes are big' = person with big eyes
3. Colour	[pwulk-eci-n] kkot be red-become-REL flower 'a flower which has become red' = reddened flower
4. Human Propensity	[maum-i nelb-un] salam mind-NOM broad-ATTR person 'a person whose mind is broad' = generous person
5. Age	[nai-ka tu-n] salam age-NOM take-REL person 'a person who took many years' = an old person
6. Value	[meli-ka coh-un] salam head-NOM good-ATTR person 'a person whose head is good' = a smart person
7. Speed	[pal-i ppalu-n] salam foot-NOM fast-ATTR person 'a person whose feet are fast' = a fast runner

As shown above, some property concept words are expressed in relative clauses in Korean, which indicates a close semantic and functional relationship between adjectives and relative clauses. However, it is not clear whether the changed word or clause is an adjective or a relative clause when a descriptive verb is suffixed by *–(u)n*

and so far few studies have been done to clarify this issue. When Hwang (1996:147) claimed that 'attributive adjectives are RCs in Korean, from which the subject is gapped', she noticed that there are many examples of RCs which consist of a single adjective word and she finds that the distinction between adjectives and relative clauses is not straightforward as in English which has different positions and forms for them. Using the pattern in English *a pretty person [whose heart is good],* she points out the difficulties of doing a comparative study with Korean and used the following example with two adjectival clauses to make her points. Hwang explains that both *maum chakha-ko* 'heart is good' and *eyeppun-n* 'pretty' are adjectival clauses in one RC as in (3.28):

(3.28) emeni-nun [maum chakha-ko eyeppun-n] pwun i-si-ess-nunte
mother-TOP heart be good-and pretty-ATTR person is-HON-PAST-but
'Mother was a [good and pretty] person, but . . .' (Lit. Mother was a person [whose heart was good and who was pretty] (Hwang, 1996:147 (9))

There is no explanation as to how two adjective clauses can be just one RC. From her claim, we assume that she considers both *eyeppun* and *maum chakha-ko* are RCs . In my analysis *eyeppun* is an attributive adjective and the other *maum chakha-ko* is from the RC. In actual fact, the clause '*maum chakha-ko*' itself is not a relative clause or an adjectival clause because *maum chakha-ko* cannot modify the head noun *pwun* 'person'. It is a clause derived from '*maum-(i) chakhata*' where the subject particle *i* is omitted and the sentence ending is now changed with the coordinate ending *–ko* 'and'. When it is changed to '*maum-(i) chakhan*' attached by modifying ending *–(u)n* and with the subject *maum-(i)* 'heart', then it is a relative clause. Therefore, the coordinate clause '*maum chakha-ko eyeppun-n*' is just one relative clause reduced from one relative clause plus one adjective as in (3.29):

(3.29) 'maum(i) chakha-n kuliko eyeppun-n'
heart-(NOM) be good-REL and pretty-ATTR
'pretty and whose heart was good'

If the sentence is without *maum* 'heart', it is still a perfect sentence with the same meaning because the descriptive verb *chakhata* 'to be good hearted' is commonly

used for *maum-i chakhata* 'Heart is good'. So in the following example, without *maum*, two descriptive verbs are changed to attributive adjectives, *chakhan* and *eyeppun* and are joined by the coordinate ending *–ko* to become '*chakha-ko eyeppun-n*' meaning 'good hearted and pretty'. But *chakha-ko* is not a relative clause but an adjectival clause, therefore '*chakha-ko eyeppun-n*' is an adjectival clause as in (3.28a).

(3.28) a. emeni-nun [(maum) chakha-ko eyeppun-n] pwun i-si-ess-nunte
mother-TOP heart be.good-and pretty-ATTR person is-HON-PAST-but
'Mother was a [good and pretty] person, but . . .'

On the other hand, the English pattern *a pretty person [whose heart is good]* can be translated into *[eyeppu-ko maum-i chakha-n] pwun* which is an adjectival clause plus a relative clause, equivalent to English. It shows that in Korean, either attributives or relative clauses can be joined by the coordinate ending *–ko* because of head-final position in both adjectives and RCs whereas in English RCs are always in head-initial position. The coordinate ending *–ko* has the function of joining descriptive verbs in equal relationship (Suh, 1994:1036). Thus, whether it is *eyeppuko chakhan* or *chakhako eyeppun*, there is no difference in meaning. However, if it is the processive verb, the order of presenting verbs can make a difference in meaning by denoting the sequence as in (3.29a) and (3.29b):

(3.29) a. cha-ka mikkuleci-ko memchwu-ess-ta.
car-NOM slip-and stop-PAST-END
'The car slipped and stopped.

b. cha-ka memchwu-ko mikkuleci-ess-ta.
car-NOM stop-and slid-PAST-END
'The car stopped and slid.

3.4.2 Comparison with English prenominal and postnominal adjectives

In English, the adjective can be positioned before or after the noun. Bolinger (1967, 1977:18) pointed out that 'an adjective that is placed before the noun is not just any other adjective that can occur after the verb *be*, but is one that can be used to do more

than describe a temporary state – it has to be able to characterize the noun'. Prenominal adjectives therefore have more permanent characteristics than adjectives that follow the noun. When the adjective follows the noun, it may be derived from a restrictive clause that has undergone the "relative pronouns plus BE deletion" transformation which tends to reflect a temporary state or a specific event. For example, "Comprehensible program" can be derived from "program that is comprehensible". The following examples show that the same adjectives have a different semantic interpretation according to their position (Celce-Murcia and Larsen-Freeman, 1983:392, 1,2,3).

(3.30) a. The stolen jewels... (a characteristics of the jewels)
totwukmaj-un bosektul
steal-REL jewels

b. The jewels stolen ... (identified by a specific act ... maybe they were
totwukmaj-ass-ten bosektul recovered later)
steal-PAST-REL jewels

(3.31) a.The only navigable river .. (usual fact about a given region)
ywuilhakey hanghay ha-l swu-iss-nun kang
only navigate do-possible-REL river

b. The only river navigable ... (temporary state due to a drought or some such event)
ywuilhakey hanghay hal-swu-iss-ess-te-n kang
only navigate do-possible-PAST-RET-REL river

(3.32) a. The guilty people ... (a characteristics, classifying modifier of the people)
coi-ka iss-nun salamtul
guilt-NOM have-REL people

b. The people guilty ... (the people are described in terms of one act or event)
coi-ka iss-ess-ten salamtul
guilt-NOM have-PAST-REL people

When we translate the above examples into Korean, the English prenominal adjectives are better translated as attributive adjectives and the postnominal adjectives as relative clauses in Korean. Bolinger's explanation in which postnominal adjectives are in fact transformed restrictive relative clauses which tend to reflect temporary states or specific events is exactly congruent with my argument thus far.

3.4.3 Complex adjective phrases are never attributive

Hwang (1996) notes the ambiguity of the distinction between adjectives and relative clauses in English, and comments "Some adjectival ideas—especially lengthy ones—in English could be in RCs so that a true comparison of the grammatical construction called RCs in two languages is theoretically unattainable" (p. 147). It has been noted, however, that complex adjectival phrases in English are usually generated in the verb phrase rather than in an attributive position and are therefore expressed as relative clauses, as we can see from the following examples:

(3.33) The man (who was) responsible for the accident
*the responsible for the accident man

(3.34) The decision (that was) instrumental in the department's development ...
*the instrumental in the department's development decision
(Celce-Murcia and Larsen-Freeman, 1983:395)

The reason for the long adjectival clause being ungrammatical was explained as:

> The inability of such complex adjectival phrases to function attributively is not surprising in that they almost always refer to specific actions, processes, or events - i.e., meanings that are incompatible with the attributive use of adjectives in English (Celce-Murcia and Larsen-Freeman 1983: 395).

J. Hawkins (1983) explains that if modifiers are heavy in larger grammatical units, in terms of number of words or constituency (e.g. relative clause), it tends to follow the noun. In other words, actions, processes and events are expressed with tense-aspect in the form of relative clauses, which is also in the same line as my argument.

When the relative clause is a simple predicate in English, the attributive form is usually preferred as the attributive adjective, having a closer association with the

noun than the restrictive relative clause (unless aiming for a semantic effect in the discourse). Interestingly however, when they are translated into Korean, they are both attributive adjectives and there is no other way to express the simple English relative clause in Korean (H.M. Sohn, 1999) except using connective endings such as *–nuntey* 'and'.

(3.35) a. John bought a red house.

John-i ppalga-n cip-ul sa-ass-ta.
name-NOM red-ATTR house-ACC buy-PAST-END

b. John bought a house that's red.

John-i ppalga-n cip-ul sa-ass-ta.
name-NOM red-ATTR house-ACC buy-PAST-END

(3.36) a. Mary made some amusing remarks.

Mary-ka wusuwu-n mal-ul ha-yess-ta.
name-NOM amusing-ATTR remark-ACC do-PAST-END

b. Mary made some remarks that were amusing

Mary-ka wusuwu-n mal-ul ha-yess-ta.
name-NOM amusing-ATTR remark-ACC do-PAST-END
(Celce-Murcia and Larsen-Freeman, 1983:391)

This is due to the different characteristics of the languages especially the position of the relative clauses in respect to the head noun and also the utilization of the relative pronoun in English and the relativizer in Korean. The following example illustrates this particular characteristic of Korean:

'Pretty, tall and smart person whose heart is good and who has a good job'

(3.37) eyeppu-ko, khi-ka khu-ko, meli-ka coh-ko, chakha-ko,
pretty-and height-NOM tall-and head-NOM good-and good hearted-and
choh-un cikep-ul kacin salam
good-ATTR job-ACC have-REL person

In English, there are three adjectives (pretty, tall, smart) and two relative clauses; [whose heart is good] and [who has a good job] but in Korean, two adjectives (*eyeppuko* and *chakhako*) and three relative clauses [*khika khun*], [*melika cohun*], [*cohun cikepul kacin*] all joined together by the coordinate ending *–ko*. Notice that in English attributive adjectives are all prenominal and the two relative clauses are head-initial positions whereas in Korean the attributes and relative clauses all come before the head noun. This head-final characteristic of the relative clause has an influence on the function of the relative clause in the context of discourse (Hwang 1996:144) which will be discussed in 3.6.

The problem of distinguishing the adjective and the relative clause in Korean was also raised by Kim and Shin (1994). They consider *–(u)n* with processive verbs denotes the past tense but with adjectives, it denotes the present tense and note that 'The attributive usage of the morpheme *–(u)n* creates some problems in determining the status (an adjective or a relative clause) of the linguistic category used by *–(u)n*' (p. 482). They used a descriptive verb *–huita* (to be white) and try to highlight the problem:

(3.38) a. hui- n pyek ' a white wall'
white-ATTR wall

b. hui-ess -te-n pyek 'a wall which was once white'
white-PAST -RET-REL wall

c. hui-(e)ci -nun pyek 'a wall which becomes white'
white-become-REL wall

d. hui-(e)ci -l kkoch 'a flower which will become white'
white-become –REL flower
(Kim and Shin, 1994:482)

The explanation for the criterion adopted by Kim and Shin is

> ... conventional wisdom, to the effect that if a word has the productive *–n* ending, and is semantically stative, then we treat it as an adjective phrase,

unless it is used in a tensed clause, as in (3.38b). Since the forms *–nun* and *–l* are considered to be in the portmanteau form of tense and *–N* in Kim's analysis, items fixed with these two morphemes are considered to be in a finite clause, i.e. a relative clause, as in (3.38c) and (3.38d) (1994, 481-482).

No explanation was given in their analysis as to why the tensed clause (3.38b) is treated as a relative clause.

In my analysis, *huiessten* is a relative clause because the descriptive verb *huita* has changed its semantic status by suffixing the past tense marker *-ess* and the retrospective marker *-te* denoting that a process took place, and as a result, the colour is no longer white, it is changed. For (3.38c) and (3.38d), the descriptive verb *huita* becomes a processive verb *huiecita* (to become white) by attaching *–a,e,cita* thus taking the relativizer *–nun* and *–l* that is used for processive verbs. Korean descriptive verbs become processive verbs when they are combined with auxiliary verbs as in the following examples:

cohta (to be good) + *–a,ehata* → cohahata (to like) = active
–a,ecita → cohacita (to become to like) = inchoative
–keyhata → cohkeyhata (to make something good) = causative

The effect of changing the linguistic category from the descriptive verb to the processive verb is that 'the adjectives are used to express steady states and the derived verbs are used to express states which are variable ... which denote processes having a beginning and an ending' (K.D. Lee, 1993:151-152). This observation is in line with Givón's (1984) 'time stability' concept in regard to the linguistic category between the descriptive verb and the adjective, and processive verb as discussed in section 3.3.

Lee, H.B. also noted the following but did not provide any explanation.

> As a rule, the European adjective corresponds to the Korean adjectival clause whose P is the descriptive type whereas the European modifying clause marked by a relative pronoun corresponds to the Korean adjectival clause whose P is the processive type (1989:174).

Thus, it is clear that when the descriptive verb is suffixed by the nominal modifier *–(u)n* it belongs to the cross-linguistically categorized category, the adjective, because they are semantically more time stable. However, when the descriptive verbs are suffixed by the aspect marker *–te* or *ass/ess-te* and sometimes with the irrealis *–(u)l,* they are variable in terms of time stability, which means their status has changed or can change, and is no longer stable. It is therefore categorized as a relative clause. Similarly, when descriptive verbs become processive verbs combined with auxiliary verbs, they are also relative clauses. This phenomenon is studied from a typological perspective and described in the following terms:

> ... prototypically simple concepts are universally expressed as single morphemes, prototypically complex concepts are universally expressed as complex linguistic structures, and intermediate concepts vary cross-linguistically (Croft, 1990:173).

Dryer (1992:109) also put it quite simply 'what distinguishes adjectives from relative clauses is the fact that the former are single words while the latter are phrases' which applies to English and in some extent to Korean. The following full sentences illustrate these differences:

In (3.39), *cohun* is an attributive adjective:

(3.39) coh-un umsik-i mani iss-eyo
nice-ATTR food-NOM many is-END
'There is lots of nice food.'

(3.40) kimchi-nun hankwuksalamtul-i cohaha-nun umsik-i-eyyo.
kimchi-TOP Koreans-NOM like-REL food- is-END
'Kimchi is the food that Korean people like.'

(3.41) meli-ka coh-aci-nun umsik-i mwue-i-yeyo?
head-NOM good-become-REL food-NOM what-is-END
'What is the food that makes people smart?'

(3.42) kieklyek-ul cohkeyha-nun umsik-i iss-eyo?
memory-ACC good-make-REL food–NOM is-END
'Is there any food that makes our memory work better?'

In (3.40) the descriptive *cohta* 'to be good' was made a processive verb *chohahata* 'to like' by attaching the auxiliary verb *–a,e hata*. The verb *hata* 'to do' is the most versatile verb in Korean, having many important functions to change linguistic categories but in this case, it changes the descriptive verb to a processive verb.

When descriptive verbs are combined with *–a,e cita*, they become processive verbs (H.B. Lee, 1989; Suh, 1994:553) as in (3.41). The auxiliary verb *–a,e cita* functions as a device to change the state of stative to inchoative indicating that there has been a change of state and it is the beginning of a new state. In (3.42), the descriptive verb was made a causative verb by attaching the auxiliary verb *–a,ekey hata*.

The syntactic and semantic expansion of the descriptive verbs and the processive verbs reveal an interesting relationship which clarifies the characteristic of the relative clause. One's own personal feelings are often expressed by a descriptive verb which is classified as a 'sentimental adjective' (You, 1998) but describing one's own and somebody else's feelings is expressed by suffixing the auxiliary verb *–a,e hata* to the descriptive verb stem. K.D. Lee (1993) explains that the verb *hata* is the profile determinant, thus it gives a perfective temporal profile that is the same as the processive verb. You explains that *–a,e hata* is a grammatical device which is used to resolve pronoun constraints, for example, in order to change from describing the first person's feelings to the second or third person's feelings.

Subjective feelings	**Objective feelings**
kipputa (to be pleased)	kippehata (to feel pleased)
sulphuta (to be sad)	sulphehata (to feel sad)
kulipta (to be long for)	kuliwehata (to feel homesick)

When the adjective is changed to a processive verb, the syntactic structure is also changed from a one-argument predicate as in (3.43) to a two-argument predicate as the status of verb is changed from an intransitive to a transitive which takes an object as in (3.44). Consequently, in (3.44), two noun phrases can be relativized:

(3.43) na-nun kohyang-i kulipta
I-TOP hometown-NOM miss
'I am homesick.'

→ a. kohyang-i kuliwu-n na
hometown-NOM miss-REL I
'I who long for my hometown'

(3.44) na-nun nul kohyang-ul kuliwuehanta. (K.D. Lee: 1993:153, (40b))
I-TOP always hometown-ACC long for
'I always long for my hometown.'

→ a. kohyang-ul kuliwueha-nun na
home town-NOM long for-REL I
'I who long for my hometown'

→ b. nay-ka kuliwueha-nun kohyang
I-NOM long for-REL hometown
'The hometown that I long for'

The distinction between descriptive verbs and processive verbs is even clearer when we examine verbs that can be both descriptive verbs and processive verbs. There are few verbs that belong to this category. Examples are:

pakta (to be bright) - pangnunta (to dawn)
nukta (to be old) - nungnunta (to get old)
khuta (to be big) - khunta (to grow)
natta (to be better) - natnunta (to get better)

Take the example of *khuta* (to be big):

(3.45) khu-n ai-ka Youngswu-i-eyo.
big-ATTR child-NOM name-is-END
'The big child is Youngswu.'

(3.46) khu-nun aitul-un cengmal mani mek-eyo.
grow-REL children-TOP really a lot eat-END
'Children who are growing really eat a lot.'

(3.47) panghak-tongan khu-n aitul-to iss-ko an khu-n aitul-to
vacation -while grow-REL children-too is-and not grow-REL children-too
iss-eyo.
is-END
'There are children who have grown during the vacation and children who have not grown.'

Khun in (3.45) is an adjective in which the nominal modifier *–(u)n* is suffixed to the descriptive verb stem *khu-* and is in a semantically stable state at the point of utterance. In (3.46) *khu-* is the processive verb stem and thereby takes the relativizer *–nun* — the tense is present and the aspect is imperfect. In (3.47) *khu-* is also the processive verb stem, which is why the relativizer *–n* is used to indicate the tense is past and the aspect is perfective.

3.5 Prepositional phrases and relative clauses

Another significant difference can be noted in the use of relative clauses between Korean and English. In English, prepositional phrases are more commonly used than relative clauses:

a. people in uniform
b. people who are in uniform

a. the house on the beach
b. the house which is on the beach

In Korean, one of the nominal modifiers, 'the possessive marker *–uy*' has a similar function to prepositional phrases in English as in (3.48a). However in Korean, the relative clause is more commonly used as in (3.48c) than (3.48a). Suh (1994) notes that 'Noun plus the possessive marker *–uy*' can be semantically traced back from the deep structure and has about ten different meanings, such as location, possession and

cause, to name just three. In (3.48a), the underlying meaning is location and is equivalent to (3.48b). When the relative clause is preferred, it is due to the functional role of relative clauses whereby the relative clause specifies or identifies the head noun more than nominal modifiers can.

(3.48) a. chago-uy cha
garage-of car
'the car in the garage'

b. chago-ey cha-ka issta.
garage-in car-NOM is
'There is a car in the garage.'

c. chago-ey iss-nun cha-nun hankwukcey-ita.
garage-in is-REL car-TOP Korean made-is
'The car which is in the garage is Korean made.'

For the same reason, (3.49b) is more common than (3.49a) because the verb *–ipta* 'to wear' with the relativizer *–un* identifies the head noun 'the person', whereas (3.49a) is a bit ambiguous.

(3.49) a. noran shass-ui salam-i Peter-i-eyo.
yellow shirt-in person-NOM name-is-END
'The person with the yellow shirt is Peter.'

b. noran shass ip-un salam-i Peter-i-eyo.
yellow shirt wear-REL person-NOM name-is-END
'The person who is wearing the yellow shirt is Peter.'

In English, the most frequently occurring prepositional phrases are usually in the form of [Relative pronoun + be] and when they are reduced to prepositional phrases, they are the result of the relative pronoun + BE deletion transformation as below: (Celce-Murcia and Larsen-Freeman 1983: 379).

(3.50) a. 'The ice skater [who is] in the show looks familiar.'

sho-eyse ais skeyitu tha-nun salam-i natikta.

show-in ice skate ride-REL person-NOM familiar

→ b. 'The ice skater in the show looks familiar.'

sho-eyse ais skeyitu tha-nun salam-i natikta.

show-in ice skate ride-REL person-NOM familiar

Notice that for the equivalent Korean, they are both expressed in relative clauses. The difference in the use of the relative clause is again due to the language-specific characteristics in the formation of relative clauses where Korean is head-final and utilizes the relativizer, which is positioned in clause-final position with tense and aspect encoded.

3.6 Functions of relative clauses

In this chapter, we have examined the form-function of attributive adjectives and relative clauses in Korean, which can be summarized as follows. The English counterpart is also presented to note cross-linguistically-significant characteristics of the relative clause.

Table 3.7 Summary of form-function of attributive adjectives and relative clauses

KOREAN

	Attributive adjective	**Relative clause**
Grammatical form	Descriptive verb stem+ *–(u)n* only	Processive verb stem+ *–nun, –(u)n, –ten, – (u)l*
Word order	prenominal	prenominal
Tense	-	non-past and past
Aspect	perfective	perfective and imperfective
Time	time-stable	time-variable
Syntax	simple	complex
Function	modifying	restricting
Concepts	permanent states	events and actions

ENGLISH

	Attributive adjective	**Relative clause**
Grammatical form	adjective	Relative pronoun +clause
Word order	prenominal	postnominal
Tense	-	non-past and past
Aspect	perfective	perfective and imperfective
Time	time-stable	time-variable
Syntax	simple	complex
Function	modifying	restricting
Concepts	permanent states	events and actions

The universal typological approach combined with the form-function analysis on the attributive adjectives and relative clauses in Korean have been used to clarify their respective functions which are congruent with research findings thus far. In Korean, all modifiers including determiners, attributive adjectives and relative clauses appear before the head noun. When the determiners (demonstratives, numerals, genitive and attributive adjectives) are not functioning successfully to identify the head noun, the relative clause is used to confirm the identity of the head noun. In other words, the relative clause can supply information relatively freely where information is lacking by using determiners. Kim identifies the following functions of relative clauses: (H.S. Kim, 1994:337-341)

1) to disambiguate
2) to confirm and emphasize the referent
3) to distinguish and identify the head noun effectively
4) to draw the hearer's attention by reflecting the hearer's interests
5) to limit the deictic to a particular category
6) to avoid misunderstanding in communication

Hwang's (1990) study on the functions of narrative discourse in Korean in comparison with English found that some relative clause functions are common in both English and Korean. For example, the relative clause is used to provide background information about participants and props. Hwang argues that in Korean, when descriptive verbs are used in relative clauses, they characterize the human head

noun, and when processive verbs are used, they describe and identify the human head nouns. As pointed out in 3.3, if a descriptive verb is changed to a noun modifier by suffixing *–(u)n*, in her example *elin* 'small/young', it is an attributive adjective and not a relative clause. Thus, her finding in fact confirms the form-function distinction between attributive adjectives and relative clauses that I proposed in this chapter.

Another major function found in both languages is cohesion in discourse. This is achieved by referring back to a participant/prop or to an earlier event, summarizing an earlier event or foreshadowing what is to come. All these functions are possibly due to the characteristics of the relative clause in Korean in which tense and aspect are encoded in the relativizer whereas attributive adjectives are incapable of carrying such functions.

Hwang noticed one major difference between English narrative and Korean narrative. That is, in English narrative, introducing participants into the story is one of the major functions of relative clauses. Fox and Thompson (1990) examined the interaction between the grammatical roles associated with relative clauses and their context of use and they found that one of the significant patterns in the distribution of relative clauses is 'grounding'. As they explain,

> ... to ground a noun phrase is to locate its referent in conversational space by relating it to a referent whose relevance is clear, that is, to a given referent in the immediate context (p.300).

In the following examples (Fox and Thompson 1990:301), relative clauses are used to introduce a referent 'this man' and 'a woman' into the conversation to make the conversation more effective and the relative clauses [who I have for linguistics] and [who's a nurse] are providing background information about the referents.

(3.51) *This man* [who I have for linguistics] is really too much.

nay-ka [enehak-ul tut-nun] salam-i issnun-tey i salam-un cengmal
I-NOM [linguistics-ACC listen-REL] man-NOM is-but this man-TOP really
nemwuha-ye.
too much-END

(3.52) There's *a woman* in my class [who's a nurse].
wuri pan-ey etten yeca-ka issnun-tey kanhowuen-iya.
our-class-in a woman-NOM is-and nurse-is

This particular function, 'grounding' was not found in Korean when Hwang (1990) analysed six folk tales in Korean including "The Three Little Pigs", "Shim Chung", "Cinderella". For the same function, instead of relative clauses Korean uses coordinate clauses to introduce participants as we can see from the Korean version in (3.51), (3.52) and the following (3.53).

(3.53) emma toayji-wa ssaykki toayji sey mali-ka sal-ko iss-ess-umnita.
mommy pig-and baby pig three Counter-NOM live-PROG-PAST-END
'There lived a mother pig and three little pigs.'
(Hwang, 1990:386 (22))

If the relative clause is used in the same way as English, the sentence would sound unnatural as in (3.54):

(3.54) ssaykki toayji sey mali-lul kaji-n emma toayji-ka sal-ko iss-ess- umnita.
baby pig three Counter-ACC have-REL mommy pig-NOM live-ing-PAST -END
'There lived a mother pig who had three little pigs.'

In Korean, the grounding role is usually played by the conjunctive ending, *–nuntey*. The form *–nuntey* is most commonly used in providing background information with introductory and suggestive functions (K.D. Lee, 1993). The *–nuntey* clause is used to draw the addressee's attention to a particular event or entity which, in the speaker's view, is not in the addressee's consciousness. The speaker, then, introduces a topic that is related to the given entity or event. That is why, in the equivalents of (3.51) and (3.52), *–nuntey* is used instead of relative clauses. This particular function, as a background-establishing marker, is most frequently used in the first sentence of folk tales to provide circumstantial information, which then leads on to the development of the story.

H.Y. Kim (1992) argues that *–nuntey* does not introduce a new participant in the clause where it occurs, but rather it signals a change of participants or a different argument in the following clause. She identifies the morpheme as a discontinuity marker which is used to signal the point where the discontinuity of participants, events, or action has taken place.

On the other hand, H.M. Sohn (1999:306) argues that '*–nuntey* consists of the indicative relative clause ender *–nu-n* (IN-RL) and a defective noun *–tey* 'place, circumstance' suggesting that in the form *–nuntey* the earlier relative constructions (relative clause + head noun) which has become grammaticalized as conjunctive suffixes'.

3.7 Summary

In this chapter, we have examined three linguistic categories that are pertinent in examining the relative clause in Korean. Each category has been examined from the functional-typological approach (Croft, 1990) to define the form-function of the descriptive verb, attributive adjective and relative clause. I have demonstrated that Dixon's (1977) universal adjective types are mostly expressed by descriptive verbs and most of the seven universal property concept words (Thompson, 1988) are expressed in relative clauses in Korean.

In order to classify the descriptive verbs and attributive adjectives in the cross-linguistic category, I have applied Givón's (1979) time-stability concept and Croft's (1991) prototypical correlations of syntactic categories. I have proposed that the descriptive verb in Korean occupies a place between the attributive adjective and the verb. The criterion for the cross-linguistic category between adjectives and relative clauses has also been explained and made clear. Instead of confusing dual explanations given to the modifying ending *–(u)n* thus far, I propose a prototypical meaning of perfective aspect, which denotes the completion of situation (Comrie, 1976). When the descriptive verb is suffixed by *–(u)n* then it makes the state time-stable, a more permanent state like the adjective. By the same token, when the processive verb is suffixed by *–(u)n*, it indicates the completion of action or process which usually belongs to the past at the time of utterance. The derived verbs, such as tensed descriptive verbs or the descriptive verbs combined with auxiliary verbs are relative clauses because their linguistic categories are changed from the descriptive verb to the processive verb. It is the distinctive features and characteristics of each

verb, which convey the meaning of the perfective aspect differently, but the prototypical semantic function remains the same.

The basic functions of relative clauses are the same in both English and Korean. In both cases they provide background information about the head noun. However, because of the distinctive features of the relativizer, which appears in the clause-final position encoded with tense and aspect, it can provide functions that are not possible with the use of attributive adjectives. I have shown this by comparison with prenominal and postnominal adjectives in English. One particular function of relative clauses in English, 'grounding' is expressed differently in Korean by using the connective ending *–nuntey*. This is due to the head-final relative clause construction and verb-final word order in the matrix sentence.

Chapter 4 Processing the relative clause in Korean

4.1 Introduction

As reviewed in Chapter 2, one of the salient features of the relative clause in Korean is its head-final, left-branching characteristics. Consequently the relative clause in Korean presents modifying information about the head noun before the identification of the head noun (Hwang, 1996). This is one of the major differences between Korean and English in the processing of the relative clause. In English, the head noun is presented first, followed by the relative clause. Hence, the position of the relative clause in relation to the head noun has major implications for language processing. This is because language processing is incremental, as the structure of the sentence is generated '"from left to right" as successive fragments of the message become available' (Levelt, 1989:235).

In this chapter, in order to identify the implications of processing the head-final relative clause in Korean, I will firstly examine the internal orderings of the verb phrase to determine the syntactic and semantic relationship between the relative clause and the head noun. The composition of the verb phrase is examined with particular focus on the syntactic and semantic functions of the auxiliary verb in the verb phrase. I will analyze the significance of the linear ordering of elements in the verb phrase to establish the co-relationship between the grammaticalization and conceptualization of the verb phrase and subsequently the relative clause with its head noun.

Secondly, in the light of processing theory, I will demonstrate that in Korean, the relative clause has semantic constraints on the head noun which are contrary to the arguments presented to date. I will also show that the branching-direction is accountable for the parsing of recursive left-branching relative clauses and that the relativizer plays a significant role in the processing.

4.2 Internal orderings of the verb phrase

4.2.1 Composition of the verb phrase

In Chapter 3, I argued that the distinction between the adjective and the relative clause in Korean lies in the concept of time, as the adjective describes a state – something stable and permanent, and the relative clause describes a process with a beginning and an end. The distinction is made from the type of verb before it is

transformed into an attributive adjective or relative clause. This clarification leads us to closely examine the composition of the verb phrase, because the relative clause is essentially a modified form of the processive verb phrase in Korean.

Before examining verb phrases in Korean, the following section briefly reviews how languages use different grammatical mechanisms to express major semantic types of the verb class, such as motion, affect, attention and speaking. Dixon (1995) categorized verbs into two types that can be applied cross-linguistically based on the semantic type as below:

> **Primary verbs** just relate to subject and object, and make up a complete sentence with NPs filling their argument slots. They are always expressed as verbal lexemes and do not need to relate to any other verb.
>
> **Secondary verbs** encode meanings that relate to some other verbs. They can be expressed as verbal lexemes or as affixes or verbal modifiers or clausal particles. All secondary verbs relate to some action or state and demand a grammatical link to another verb (Dixon, 1995:176-178).

The Secondary concepts, which modify the meanings of the main verb, are expressed by auxiliary verbs in Korean. In order to link these verbs, each language employs different grammatical means. Dixon (1995:179) itemizes three main methods that languages use to link the verbs:

1. The second verb can be nominalized, and then function as head of an NP in subject or object.
2. Both verbs can appear, in apposition, in the same verb phrase.
3. The verbs can occur in separate clauses, which are linked together by one of a number of grammatical strategies.

Korean utilizes the second method in which the main verbs and the auxiliary verbs appear in apposition, in the same verb phrase. The formation of the verb phrase in Korean involves two major constituents - the expansion and the verbal head. H.B. Lee's (1989) diagram (Table 4.1) describes the overall picture of the composition.

Table 4.1 The verbal phrase structure (H.B. Lee, 1989:123)

Adv./Adv.ph.	$V^1V^2V^3$	V.aux.^{1} V.aux.^{2} V.aux^3 ....V.aux.^{n}
	Nucleus	(Satellite)
Expansion	Head	

The expansion consists of an adverb or an adverbial phrase, which comes before the verbal head to modify the whole verbal head, but the expansion is optional. The focus in this section is on the verbal head, which has two components; the 'Nucleus', which consists of one to three main verbs and a 'Satellite', which consists of one or more auxiliary verbs, followed by the nucleus.

The relationship between the nucleus [the main verb(s)] and the satellite [auxiliary verb(s)] is central to the understanding of the syntactic and semantic relationship between the relative clause and the head noun. Verbal word order in Korean is congruent with the prediction that in OV languages the main verb precedes the auxiliary verb (Dryer, 1992) and no other elements can come between them, except inflectional morphemes (Suh, 1994).

There are two kinds of combinations in the verb phrase. The first one is a main verb with other main verb(s). The main verb is also called the lexical verb (Halliday, 1985:175) or the content verb (Dryer, 1992:100) since the verb has the main semantic and argument function in the verb phrase. Hence when two main verbs form a compound verb, each verb maintains its own semantic value as we can see below (details in 4.2.4.2).

transitive with intransitive: *cap-a-kata* 'catch and go'
intransitive with transitive: *anc-a-mekta* 'sit and eat'
transitive with transitive: *sa-a-mekta* 'buy and eat'
intransitive with intransitive: *shi-e-kata* 'rest and go'

The second type is the main verb(s) with auxiliary verb(s). We pay particular attention to this type, in order to determine the syntactic and semantic relationship between the head noun and the relative clause. The main verb can be either a processive verb or a descriptive verb, but the combination is ultimately determined by the auxiliary verb (H.B. Lee 1989; K.D. Lee, 1993; S.H. Lee, 1992). The Korean verb phrase can have a multiple list of verbs linked by inflectional morphemes such

as *–a,e,ye, –ke, –ci* and *–ko*. As a result, there can be various combinations of verbs to form a verb phrase as will be examined in 4.2.5. The composition of the verbal phrase in Korean can be illustrated in the following example:

(4.1) yen-i hanul nophi [nala-ola ka-peli-ess-ta].
kite-NOM sky high fly-up to-away-PAST-END
'The kite flew up and away high in the sky.'

In (4.1), the adverbial phrase, *hanul nophi* 'high in the sky' is a verbal expansion and *nala-ola-ka-peli-ess-ta* is a verbal head which is consisted of two main verbs; *nalta* 'fly' and *oluta* 'up' that are both intransitive verbs, plus two auxiliary verbs; *kata* indicates direction and *pelita* has the aspectual meaning of completion and all verbs are linked by the inflectional morpheme *–a,e,ye*. The selection of the allomorphs of *–a, –e* or *–ye* is according to the type of vowel in the preceding syllable; *–a* form occurs with the preceding vowel, */a/* or */o/*; and *–e* with */e/*, */wu/*, */u/*, */i/*; *–ye* is seen only with the verb *hata* 'to do'. This phonological application follows vowel harmony rules (H.B. Lee, 1989).

4.2.2 Functions of the auxiliary verb

The auxiliary verb is bound to the main verb, as it cannot function without a main verb, but its function is crucial in determining the grammatical role and the semantic interpretation of the verb phrase. The following is H.B. Lee's (1989) explanation about the main functions of the auxiliary verb:

(i) 'Every auxiliary verb in the satellite determines the concatenating form in which the immediately preceding verb, whether it is a full verb in the nucleus or another auxiliary verb in the satellite, is to be inflected' (H.B. Lee, 1989: 126).

(4.2) nal-**a**-ka-**key**-ha-**ko**-sip-**ci**-anh-ta
fly- to-CAUS- want- not-END
'(I) don't want to make (it) fly away.'

In this example, the four inflectional morphemes (in bold letters) all appear in a concatenating form determined by each auxiliary verb:

anhta 'not' determines the inflectional suffix, *–ci*;

sipta 'want to' determines *–ko*;

hata determines *–key* to make the causative;

kata determines *–a* with the main verb, *nalta* 'to fly' denoting direction.

It is the auxiliary verb that imposes concatenating restrictions on the preceding verb. Hence, the grammatical patterns are written as:

-ci anhta	negation	mek-ci anh-nunta	'don't eat'
-ko sipta	desiderative	mek-ko sip-ta	'want to eat'
-key hata	causative	mek-key ha-nta	'make (him) eat
-a,e,ye pelita	completion	mek-e peli-ta	'eat (it) up'

(ii) 'Every auxiliary verb in the satellite adds to or modifies the meaning of the verb(s) in the nucleus' (ibid. p. 127), as we can see from the following example:

nal-ta 'to fly'
nal-a-kata 'to fly away'
nal-a-ka-key hata 'to make (it) fly away'
nal-a-ka-key ha-ko sipta 'to want to make (it) fly away
nal-a-ka-key ha-ko sip-ci anhta 'don't want to make (it) fly away

The core semantic and argument functions are carried out by the main/content verb expressing the event, which is *nalta* 'to fly', but auxiliary verbs add or modify the meanings of the preceding verb, thereby affecting the interpretation of the verb phrase.

(iii) 'Some auxiliary verbs determine the type of the verbal head in which they occur, i.e., verbal head of processive type or of descriptive type'. (ibid. p. 127)

For example, *–ko issta* which denotes an 'on going process' and *–ko sipta* which denotes 'want to' only determine the processive verbs. When joined with a descriptive verb, for example, *pissata* 'to be expensive', the phrases is ungrammatical as in (4.3.a and b):

(4.3) a. *pissa-ko issta
expensive-be-ing

b. *pissa-ko sipta
expensive want to

On the other hand the causative, *–key hata* determines either a descriptive verb such as *yepputa* 'to be pretty' or a processive verb such as *ilhata* 'to work'.

(4.4) a. yeppu-key hata
pretty-make
'make (someone) pretty'

b. ilha-key hata
work-make
'make (someone) work'

(iv) 'Some auxiliary verbs supplement and extend the morphological formations voice and tense' (ibid. p. 128), i.e., the passive voice formation by the auxiliary verb *–a,e,ye cita* and the progressive formation by *–ko issta*.

ccic-ta	→	ccic-ecita
to tear		to be torn

sal-ta	→	sal-ko issta
to live		is living

When the nucleus is combined with the satellite, as far as the syntactic function of the verb phrase is concerned, it is the last auxiliary verb in the verb phrase which

determines the grammatical role of the verbal phrase in the sentence indicated by inflectional endings. For example, the verbal phrase:

nala-ola-ka-pelita	'to fly (up) away'

can be inflected by a coordinate ending *–ko* 'and', or conjunctive endings such as *–ese* 'and then' or 'because', *–myen* 'if', *–lttay* 'when' and the relativizer *–n* and serve the grammatical function in the sentence.

nala-ola-ka-peli-**ko**	'flew (up) away **and'**
nala-ola-ka-peli-**ese**	'**because** it flew (up) away'
nala-ola-ka-peli-**myen**	'**if** it flew (up) away'
nala-ola-ka-peli-**lttay**	'**when** it flies (up) away'
nala-ola-ka-peli-**n**	'**which** has flown (up) away'

The main verb is a prerequisite of a verb phrase and expresses the core event. However, as far as the criterion of syntactic function is concerned, 'the nucleus is subordinate to the satellite' (H.B. Lee, 1989:124). In generative grammar, the content verb is considered as the head and the auxiliary verb is dependent on the main verb (Chomsky, 1970). However, in considering the grammatical functions of the auxiliary verb and its semantic influence on the main verb, it is clear that the auxiliary verb is the head (Dryer, 1992:99; H.B. Lee, 1989; H.M. Sohn, 1999).

4.2.3 The semantic role of the auxiliary verb in the verb phrase and the relative clause

When the verb phrase is a combination of the main verb(s) (V1) and the auxiliary verb(s) (V2), V2s modify the core event expressed by V1 by adding aspectual-modal-directional meanings (S.H. Lee, 1992; K.D. Lee, 1993; Suh, 1994; H.M. Sohn, 1999). A limited number of verbs are used as auxiliary verbs for denoting aspectual meanings listed as below:

	Meaning as V1	Used as aspectual meaning in V2
a) *peri-*	'throw away'	completion
b) *nay-*	'take out', 'put forth'	accomplishment
c) *ka-*	'go'	duration
d) *o-*	'come'	duration
e) *ka-*	'go'	direction
f) *o-*	'come'	direction
g) *tay-*	'supply', 'draw into'	continuation
h) *noh-*	'put', 'keep'	retention
i) *twu-*	'put', 'leave'	retention
j) *cwu-*	'give'	benefaction
k) *po-*	'see'	trial

Since the auxiliary verb does not have any argument structure, its main semantic function is to express the aspect:

> ... aspect markers serve to distinguish such things as whether the beginning, middle or end of an event is being referred to, whether the event is a single one or a repeated one, and whether the event is completed or possibly left incomplete (Dowty 1979:51 cited in S.H. Lee, 1992:148).

When the above listed verbs are used as a V2, the original meaning of the verb is unrecognizable in most cases. When the auxiliary verb is combined with different types of verb, such as a processive, a descriptive, a transitive or an intransitive, various interpretations can be drawn. In the following section, I briefly examine the semantic influence of the auxiliary verb on the verb phrase and subsequently on the relative clause. This process is outlined below with limited interpretations and examples.

a) pelita: Completion

As a V1, *pelita* has the meaning of 'throw away, get rid of something' but when used as a V2, it has the aspectual meaning of 'completion' which usually extends the V1's meaning. For example, depending on the main verb, the verb phrase can be

interpreted as 'regret' or 'disappointment' as in (4.5a), at other times it can be interpreted as a 'relief' (K.D. Lee, 1993) as in (4.5b):

(4.5) a. [ka-a-peli-n] chinkwu
gone-(complete)-REL friend
'the friend who is gone (regrettably)'

b. [phal-a peli-n] cha
sell-(complete)-REL car
'the car which (I) sold (to my relief)'

b) nayta: Accomplishment

Nayta has the meaning of 'take something out of place' as a V1 but as a V2, it denotes 'accomplishment' as in (4.6a). Since this auxiliary verb has the agent's viewpoint denoting the agent's ability, it cannot be used with intransitive verbs. Thus (4.6b) is ungrammatical (K.D. Lee, 1993).

(4.6) a. han sikan man-ey [ilk-e nay-n] chayk
one hour for-within read-(accomplishment)-REL book
'the book which I managed to read within an hour'

b. *han sikan man-ey [ka-a nay-n] hakkyo
one hour for-within go-(accomplishment)-REL school
*'the school which (where) I managed to go within an hour'

c-d) kata/ota: Duration

As a V1, the verbs *kata* 'to go' and *ota* 'to come' are used to indicate movement from one place to another. When used as a V2, these verbs can express the change of time from one point to another. *Kata* denotes time from present to future as in (4.7) and *ota* from past to present as in (4.8):

(4.7) [salaci-e-ka-nun] centong
disappear-(duration)-REL tradition
'the tradition which is disappearing'

(4.8) [palk-a-o-nun] achim
dawn-(duration)-REL morning
'the morning which is dawning'

e-f) kata-ota: Direction

When used as a V2, *kata* denotes movement away from the deictic center whereas *ota* indicates movement towards the deictic center.

(4.9) [nal-a ka-nun] yen
fly-(direction)-REL kite
'the kite which flies away'

(4.10) [tali-e-o-nun] ai
run-(direction)-REL child
'the child who is running towards (me, us)'

g) tayta: Continuation

The verb *tayta* as a V1, denotes that 'the subject brings something X into contact with something else Y' (K.D. Lee, 1993), but as a V2, it denotes constant repetition of the V1 as in (4.11):

(4.11) [wul-e tay-nun] aki
cry-(continue)-REL baby
'the baby who is crying continuously'

h) nohta: Retention

The verb *nohta* as a V1 means 'to put something in its own place' however, combined with a V1, it denotes 'the process comes to an end and a result comes into being' (K.D. Lee, 1993:265):

(4.12) [sa-noh-un] chayk
buy-(retention)-REL book
'the book which I have bought (therefore I have the book)'

i) twuta: Retention

This verb has a similar meaning to the verb *nohta* as a V1, with the meaning of 'put something at a place' however, *twuta* denotes that the place is inside the agent's space whereas *nohta,* denotes a place outside the agent's space. When used as a V2, the focus of the primary meaning is extended (K.D. Lee, 1993:257-264). The difference can be observed in the following example (4.13) with (4.12):

(4.13) [sa-twu-n] chayk
buy-(retention)-REL book
'the book which I have bought (for future use)'

j) cwuta: Benefaction

As a V2, *cwuta* and the honorific verb *tulita* denote '(do) something (for)' therefore the primary meaning of *cwuta* as a V1 'to give' is not recognizable, but it adds a benefactive meaning onto the V1 as in (4.14):

(4.14) sensayngnim-kkeyse [ilk-e-cwu-si-n] chayk
teacher-NOM read-(benefaction)-HON-REL book
'the book which the teacher (kindly) read to (us)'

k) pota: trial

When the verb *pota* is used as a V2, it denotes the meaning of 'try something and see what it is like'.

(4.15) hankwuk-eyse [mek-e-po-n] umsik
Korea-in eat-(try)-REL food
'the food which I tried in Korea'

In addition to the above auxiliary verbs, there are auxiliary verbs with specific grammatical functions which clearly demonstrate how the semantic relationship between the relative clause and the head noun is established. Matsumoto (1988a, cited in Collier-Sanuki, 1993) has presented the semantic relationship between the relative clause and the head noun in Japanese, and I will use some of her examples to make my point.

l) cita: Inchoative/passive

The verb *cita* as a V1 has the meaning of 'fallen' or 'lost'. As a V2, this verb has very important grammatical and semantic functions. The combination can change linguistic categories as explained in 3.4.3.

(a) Descriptive verb + *a,e,ye cita* = inchoative

(b) Transitive verb + *a,e,ye cita* = similar to the passive structures

(a) DV–a,e,ye cita:

(4.16) a. [nalssinha-yeci-nun] onchen
slim-become-REL hot spring
'the hot spring (in which by soaking) (one) becomes slim'
Matsumoto (1988a, cited in Collier-Sanuki, 1993:21 (25))

In this example, Matsumoto states that the semantic relationship between the relative clause and the head noun is 'consequence' and 'condition'. This can be said for Korean too, but how can we explain the relationship grammatically and semantically in Korean? In Korean, when the descriptive verb *nalssinhata* 'to be slim' is compounded with the auxiliary verb *–a,e,ye cita*, it denotes a change of state. A person who is overweight can become slim by having a bath in the hot spring. It highlights the fact that the semantic frame denoting consequence is construed with the auxiliary verb in Korean. If we use only a descriptive verb *nalssinhata* 'to be slim' without the auxiliary verb *–a,e,ye cita*, then *nalssinha–n* is not a relative clause but an attributive adjective. It is ungrammatical with the noun *onchen* 'hot spring' as in (4.16b), but would be grammatical with nouns like *yeca/chinkwu*/Susan 'woman/friend/Susan' as in (4.16c):

(4.16) b. *nalssinha-n onchen
slim-ATTR hot spring
*'slim hot spring'

c. nalssinha-n yeca/chinkwu/Susan
slim-ATTR woman/friend/Susan
'slim woman/friend/Susan'

j) hata: Schematic

(4.17) [penyekha-n] ton

translate-REL money

'the money which is earned by doing translation'

Matsumoto (1988a, cited in Collier-Sanuki, 1993:21 (26))

This example is used to highlight cases where the semantic relationship between the relative clause and the head noun is 'condition' and 'consequence'. In Korean, the auxiliary verb *hata* has multiple roles; one of the major roles is to derive verbs from nouns, adjectives and adverbs. When *hata* 'to do' is combined with certain nouns, the meaning is not derived by the noun alone but by convention or context (K.D. Lee, 1993:137). When the sino-Korean word *penyek* 'translation' is combined with *hata* 'to do', it indicates that there is a certain convention, which is that when one undertakes translation, the consequence is that one usually earns money. The auxiliary verb *hata* is therefore schematic as it establishes a temporal structure and indicates the existence of a certain relationship between the subject and object, which is acknowledged by convention (K.D. Lee, 1993:137).

k) –ci anhta: Negation

(4.18) [salcci-ci ahn-nun] satang

fat- not-REL sweet

'the sweet which you don't become fat by eating' = a non-fattening lolly

Matsumoto (1988a, cited in Collier-Sanuki, 1993:21 (27))

This relationship is described as 'eventuation' and 'offset'. The descriptive verb *salccita* 'to be fat' is combined with the auxiliary verb *–ci anhta* that is used for negation in the postverbal position. Distinguished from the other negation marker *an*, *–ci anhta* assumes that the listener is aware of the information and that the listener is inclined to accept the truth of the information (K.D. Lee, 1993:326). In the above example, it is assumed that everybody knows the fact that by eating sweets one becomes fat. The auxiliary verb *–ci anhta* denies that assumption and denotes the meaning 'even eating sweets one does not become fat'.

Other than the auxiliary verbs listed above which are linked by *–a,e,ye* and *–ci-anhta* for negation, there are other inflectional morphemes used to link the main verb

with auxiliary verbs. Their semantic functions are clear; *–ko issta* for denoting the progressive; *–ko sipta* for the desiderative; *–key hata* for the causative. The following table is the classification of the four groups of auxiliary verbs depending on their morphological restrictions and their semantic functions.

Table 4.2 Semantic roles of auxiliary verbs in the verb phrase

Main verb (Event)	Inflectional suffix	Auxiliary verb	Semantic role of the auxiliary verb
			Aspectual meaning
Processive or Descriptive	–a,e,ye	1. po-	Trial
		1. cwu- / tuli-	Benefaction
		2. twuta-	Retention – Resulting state
		3. iss-	Perfective aspect – Resulting state
		4. tay-	Constant repetition
		5. peli-	Completion
		6. ssah-	Excessive, repetition
		7. ka-	Duration or Direction
		8. o-	Duration or Direction
		9. noh-	Retention – Resulting state
		10. nay-	Accomplishment
		11. hata-	Perfective Temporal profile;
		(All Processive)	
		12. ci-	Inchoative
		(Both Processive and Descriptive)	(DV) Change of state: (PV) Potentiality
Processive only	–ko	1. iss-	Progressive aspect- Ongoing process
		2. sip-	Desiderative
		(All Descriptive)	
Processive or Descriptive	–ke	1. hata-	Causative
		2. mantulta-	
		3. toyta-	
		(All Processive)	
Processive or Descriptive	–ci	1. aniha-	Negative
		2. mosha-	
		(Both Processive and Descriptive)	
Processive		3. mal-	
		(Processive)	

4.2.4 Temporal ordering in the verb phrase/relative clause and its relationship with the head noun

In this section, I focus on the linear ordering of elements in the verb phrase and examine how this is related to the head noun of the relative clause. As examined in the composition of the verb phrase in 4.2.1, a verb phrase can contain up to three main verbs and one or more auxiliary verbs, all joined in a concatenating form. When verbs are linked by *–a,e,ye*, they have the characteristics of a serial verb (S.H. Lee, 1992; H.M. Sohn, 1999). The main characteristics of the serial verb are that the verb phrase expresses a single event shared by the same subject and marked by the same tense and mood, and each verb can add a meaning to the previous verb(s) as I have shown in (4.1).

There have been different views regarding the morpheme, *–a,e,ye*: H.B. Lee (1989) treats it as one of the four concatenating endings; H.M. Sohn (1999) calls it the infinitive suffix; S.H. Lee (1992) argues that *–a,e,ye* is only a linking morpheme, not a conjunctive marker and that it does not have any lexical or categorical values, nor any significant grammatical or semantic functions, but is 'suffixed just to make a bound verb 'free' in a purely morphological sense'. On the other hand, K.D. Lee (1993:173) argues that, "the verb followed by the suffix *–e* means that the process denoted by the verb is at its end point", which seems to be a plausible observation in considering the types of grammatical morphemes attached after *–a,e,ye* .

S.H. Lee (1992) has adapted the semantic template of verb serialization in Yòrubá from Awóyalé (1988) and presents the semantic template of Korean serial verb construction as below. We will discuss the combinations in the next section.

Table 4.3 The semantic template of Korean SVCs (S.H. Lee, 1992:205)

V1 only		V1 or V2		V2 only
MODALITY	↔	EVENT	↔	STATE
	<A>	↑	<C>	
	Simultaneity	|	Completion	
	Purpose	|	Accomplish-	
		|	ment	
		|	Duration	
		|	Direction	
		|	Continuation	
		<B>	Retention	
		/\	Benefaction	
		Sequence	Trial	
	(SVC2)	(SVC2)	(SVC1)	

4.2.4.1 Combination of main verb(s) and auxiliary verb(s) with *–a,e,ye*

In following the semantic template above, we first examine the combination of V1 and V2 by *–a,e,ye*, which is a serial verb construction. When the verb phrase is formed in this manner, we can see that the order of elements within the verb phrase is the reflection of the temporal order, or how the event took place, as in (4.19):

(4.19) yen-i hanul nophi [nala-ola-ka-peli-ess-ta].
kite-NOM sky high fly-up-to-away-PAST-END
'The kite flew up and away high in the sky.'

The verbal head is expanded as the event progresses as shown below:

nalta 'fly'

nalta 'fly' + oluta 'go up' → nal-a-oluta 'fly (up)'

nalta 'fly' + oluta 'go up' + kata 'to (direction)' → nal-a-ol-a-kata 'fly (up) to'

nalta 'fly' + oluta 'go up' + kata 'to (direction)' + pelita (completion) →
nal-a-ol-a-ka-a pelita 'fly (up) away'

First, two main verbs, *nalta* 'to fly', and *oluta* 'to go up' are joined to form a verb phrase *nala-oluta* 'fly up' and then they are joined with the auxiliary verb *kata*, denoting 'direction'. This all appears in apposition to form a verb phrase, *nala-ola-kata* which means 'flew up (and) away'. The verb phrase is further expanded by joining it with the auxiliary verb *–pelita* to add the aspectual meaning of 'completion' to make a verb phrase *nala-ola-ka-pelita* 'flew right (up) and away' in a concatenating serial. It is important to note here that in order to have a concatenating form in apposition, verbs must be semantically compatible (Dixon, 1995), as it would be ungrammatical to put, for example, the verb *mekta* 'to eat' in **meke-nala-ola-ka-pelita* *'eat fly up away'.

Since the auxiliary verb is unable to perform the functions of the verb by itself, *kata* and *pelita* denoting direction and completion are bound to the main verb(s) *nalta* 'to fly' and *oluta* 'go up'. The verbs *kata* and *pelita* can be main verbs with the meanings of 'to go' and 'to throw away' respectively, but when they are used as auxiliary verbs, their function is to modify the main verb(s) and provide aspectual meanings. This serial verb phrase denotes that this is a single event, which took place in temporal sequence; and the tense is marked after the final auxiliary verb. The event is expressed by the V1s depicting that at first the kite flew and went up, and then the auxiliary verbs describing the state of the kite, which has flown away. If verbs are arranged in a different order, for instance as in (4.20), the sentence is not only ungrammatical but also incomprehensible.

(4.20) *yen-i hanul nophi ola-nala-peli-ka-ss-ta
kite-NOM sky high up-fly-away-to-PAST-END

In this serial verb construction, *yen* 'kite' is the only subject. The negation also applies to the whole string of verbs as in (4.21):

(4.21) yen-i hanul nophi nala-ola-ka-peli-**ci anh-ass-ta**
kite-NOM sky high fly-up-to-away-not-PAST-END
'The kite didn't fly up and away high in the sky.'

Now if we change this serial verb phrase to a relative clause construction, we can see how the relative clause relates to the head noun.

(4.22) Peter-nun hanul nophi [nala-ola-ka-peli-**n**] yen-ul chedapo-ass-ta.
name-NON ski high fly-up-go-away-REL kite-ACC watch-PAST-END
'Peter watched the kite which flew away high up in the sky.'

The relativizer *–n* is suffixed to the final auxiliary verb stem *–peli* and denotes that the tense of the relative clause is past and the aspect is complete. The event is described in temporal order whereby the verb, which is the closest to the head noun, expresses the last activity or state. This consequently affects the semantic interpretation of the relative clause. In other words, the state of the kite is 'gone' or 'disappeared' which is farther from the beginning of the event, when the kite started to fly away. This demonstrates that the linear order of verbal elements is a reflection of the sequential experience of the head noun. Therefore the more distant that suffixes are from the head, the wider the scope (Newmeyer, 1998:116). This is also found in other languages.

Let us take another example to make the temporal order in the verb phrase/relative clause clearer. This time three main verbs that are all intransitive verbs and the auxiliary *kata* 'to (direction)' are joined in a serial construction to form a relative clause. When three verbs are joined by *–a,e,ye*, the most natural ordering is manner/cause predicate + path predicate +deictic predicate (H.M. Sohn, 1999:381).

(4.23) san-uy nwun-i [noka-hule-naylye-ka-nun] sinaytmwul-i cham malkta.
Mt-of snow-NOM melt-flow-down-to-REL creek-NOM really clear
'The creek, which the snow on the mountain melted and flowed down to, is very clear.'

The expansion occurs progressively as follow:
(4.23.a)
nokta 'to melt'
(4.23.b)
nokta 'to melt' + huluta 'flow' → nok-a-huluta 'melted and flow' = Manner/cause
(4.23.c)
nokta 'to melt' + huluta 'flow' + naylita 'down'
→ nok-a-hul-e-naylita 'melted and flow down' = Path

(4.23.d)

nokta 'to melt' + huluta 'flow' + naylita 'down' + kata 'to' (direction)

→ nok-a-hul-e-nayli-e kata 'melted and flowed away'

= Deictic

This illustrates that the linear order of elements in the verb phrase/relative clause is logical experiential process (Halliday, 1985) which mirrors how the event has unfolded; first the snow on the mountain melted and then it flowed down and away. This involves the processing of the elements in the verb phrase, as Langacker explains,

> ... any conception involving *ordering* or *directionality* at the experiential level implies some kind of seriality at the processing level, i.e. it incorporates the sequenced occurrence of cognitive events as one facet of its neural implementation (Langacker, 1997:250).

It is also important to note that the relativizer is a dependent morpheme in Korean. Therefore the last auxiliary verb *–kata* carries the relativizer *–nun* in *–ka-nun*. Hence, it denotes the tense and aspect on top of its own semantic function indicating 'direction'. As discussed in 4.2.2 on Functions of Auxiliary Verb, the grammatical role of the auxiliary verb is central in the verb phrase, as Dryer (1992:99) argues:

> What distinguishes tense/aspect particles from auxiliary verbs is that the latter typically bear all or some of the verbal inflections associated with the clause. It is this property, in fact, that provides the clearest argument for treating auxiliary verbs as heads.

4.2.4.2 Combination of main verb with main verb(s)

Following S.H. Lee's semantic template in Table 4.3, we now look at the combination of two main verbs. The modality, which is expressed by the first V1 on the left of the event in the template, denotes the 'manner' or 'purpose' of the event expressed by the second V1. There can be four combinations; and two examples of each are listed to illustrate the point:

1) Transitive (manner) + Transitive (event)

(4.24) kkak-a mek-un sakwa
peel- eat-REL apple
'the apple which (I) peeled and ate'

(4.25) mantul-e cwu-n inhyeng
make-give-REL doll
'the doll which (I) made and gave'

2) Transitive (purpose) + Intransitive (event)

(4.26) senmwul-ul sa-a ka-nun salamtul
present-ACC buy-go-REL people
'the people who buy a present and go'

(4.27) kohyang-ul chac-a ka-nun salamtul
hometown-ACC visit-REL people
'the people who are visiting their hometown'

3) Intransitive (simultaneity) + Transitive (event)

(4.28) nwu-e po-nun TV
lie down- watch-REL TV
'the TV which (we) lie down and watch'

(4.29) heyemchi-e kenne-n kang
swim - cross-REL river
'the river which (I) swam across'

4) Intransitive (simultaneity) + Intransitive (event)

(4.30) kel-e ka-nun haksayng
walk -ko-REL student
'the student who goes on foot'

(4.31) nwu-e ca-nun aki
lie – sleep-REL baby
'the baby who is lying down and sleeping'

All of the above relative clauses have serial verb combinations which depict a single event: each verb holds its own semantic value and the first V1 describes the way the second V1 is done, as if asking 'How?' (S.H. Lee, 1992). In the combination of V1 plus V1, the inflectional ending *–a,e,ye* can be replaced by *–a,e,yese* 'and then' or 'by doing . . .', which suggests that *–a,e,ye* is the reduced form of *–a,e,yese* (H.M. Sohn, 1999). However, the insertion of *–a,e,yese* would be ungrammatical in the combination of the V1 and V2 as in (4.32b):

(4.32) a. sa-ase mek-un cemsim → sa-a mek-un cemsim
buy-and then ate-REL lunch buy-INF ate-REL lunch
'the lunch which I bought and ate' 'the lunch which I bought and ate'

b. * ka-ase-peli-n chinkwu→ ka-a-peli-n chinkwu
go-and then (complete)-REL friend go-INF-(complete)-REL friend
for 'the friend who has gone.' 'the friend who has gone.'

4.2.4.3 Combination of main verb(s) with other auxiliary verbs

So far, we have examined verb phrases that turned into relative clauses and that are linked by *–a,e,ye,* in a serial construction. Now we combine the main verbs with other auxiliary verbs and see how they relate to the head noun. In the following relative clause, the verb phrase is made of two main verbs and two auxiliary verbs:

(4.33) sa-a-mek-ko sip-ci anh-un **umsik**
buy-eat- want- not-REL food
'The food which I don't want to buy and eat.

Before it is relativized, the verb phrase is expanded as follows:

(4.33a)

sata + mekta → sa-a-mek-un **umsik**

'buy' + 'eat' → buy-eat-REL food

'the food which I bought and ate'

(4.33b)

sata + mekta + -ko sipta → sa-a-mek-ko sip-un **umsik**

'buy' + 'eat' + 'want' →buy- eat- want-REL food

'the food which I want to buy and eat'

(4.33c)

sata + mekta + -ko sipta + ci anhta → sa-a-mek-ko sip-ci anh-un **umsik**

'buy' + 'eat' + 'want' + not →buy- eat- want- not-REL food

'the food which I don't want to buy and eat'

In the above expansion, the core event is expressed by the two main verbs, *sata* 'to buy' and *mekta* 'to eat' in which the first transitive verb *sata* describes the manner of the second transitive verb *mekta* which is an event. The first auxiliary verb *–ko sipta* 'want to' modifies the compound verb *sa-mekta* 'buy and eat' with an added desiderative meaning; the second auxiliary verb *–ci anhta* 'not' modifies *sa-mek-ko sipta*, adding the negation to the whole verb phrase. The last inflection denoting negation also carries the function of relativizer and influences the semantic interpretation of relative clause. This confirms the conceptual closeness (Haiman, 1985), which is a motivating factor for positioning the relativizer or relative pronouns. Hence, the closer an element is to the head noun, the more direct semantic effect it has on the head noun. We will discuss this in detail in the next section.

4.2.5 Grammaticalization and conceptualization of the relative clause and its relationship with the head noun

In Korean, marking for person, number or gender is not expressed in the verb phrase, but derivational and inflectional morphemes mark for passive, causative, aspect, desiderative, negation, honorific and tense. This section examines how the grammaticalization of the verb phrase is related to its conceptualisation. Croft (1990:190) explains that grammatical morphemes tend to express the same concepts across the world's languages and they are:

> ...the standard inflectional and "function-word" categories, including comparison and degree for adjectives; number, size, gender (including classifiers), and spatial and grammatical relations for noun; tense, aspect, modality, evidentiality, formality, transitivity, and speech-act type for verbs and/or clauses.

The following lists some examples of the most complex verb phrase types in Korean, which display rich agglutinative morphological classes. Observe the verbal expansion that begins with the transitive verb *capta* 'to catch':

(4.34a)
cap- 'to catch' — transitive verb stem

(4.34b)
cap-hi- 'to be caught' — passive

(4.34c)
cap-hi-key ha- 'to get (it) caught' — passive-causative

(4.34d)
cap-hi-key hay-e cwu- — passive-causative-aspect (benefaction)
'to help getting (it) caught'

(4.34e)
cap-hi-key hay-e cwu — passive-causative-aspect (benefaction)
-ko sip- — -aspect (desiderative)
'to want to help getting it caught'

(4.34f)
cap-hi-key hay-e cwu — passive-causative-aspect (benefaction)
-ko sip-ci anh- — -aspect (desiderative)-negation
'doesn't want to help getting it caught'

(4.34g)
cap-hi-key hay-e cwu — passive-causative-aspect (benefaction)
-ko sip-ci anh-(u)si — -aspect(desiderative)-negation-honorific
'doesn't want to help getting it caught'

(4.34h)

cap-hi-key hay-e cwu	passive-causative-aspect (benefaction)
-ko sip-ci anh -(u)si-n **apeci**	-aspect(desiderative)-negation-honorific -REL **Head Noun**

The expansion finally appears in a relative clause form as in (4.34h):

(4.34h) cap-hi-key hay-e cwu-ko sip-ci anh -(u)si-n **apeci**
'the father who didn't want to help getting (it) caught'

The order of verbal suffixes has occurred in the following grammatical procedure:

(1) The passive suffix *–hi* is applied to the transitive verb and forms a derived intransitive clause; the underlying O (Object) becomes S (Subject) of the passive; the underlying A (Transitive subject) argument assumes a peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always the option of including it. (Dixon and Aikhenvald, 1997:73)

(2) The causative suffix *–key hata* is applied to the intransitive clause and forms a derived transitive clause; the argument in the underlying S function goes into O function in the causative; a new argument is introduced, in A function; (Dixon and Aikhenvald, 1997:81)

(3) The aspectual meaning of 'benefaction' is added by the auxiliary verb, *–a,e,ye cwuta;*

(4) The desiderative, *–ko sipta* is added;

(5) The negation is added by the auxiliary verb *–ci anhta*;

(6) The honorific suffix *–(u)si* is added for the head noun *apeci* 'father';

(7) The relativizer *–n* is attached to the honorific suffix denoting that the tense is past and the aspect is complete.

The whole procedure is highly regulated by grammatical rules: the passive and causative voice suffixes can occur one at a time, as they are mutually exclusive (H.B. Lee, 1989:84). The derivational suffixes (i.e. passive and causative) precede the inflectional suffixes as Greenberg's Universal 28 predicts: "If both the derivation and inflection follow the root, or they both precede the root, the derivation is always

between the root and the inflection" (Greenberg 1966:93). This is due to conceptual distance (Haiman, 1985), since the derivational morpheme alters the meaning of the verb (i.e., *cap-ta* 'to catch' is inflected with the passive suffix *–hi-* becomes *cap-hi-ta* 'to be caught'). It is therefore the most relevant to the verb and needs to be the closest to the verb stem, whereas the inflectional morpheme 'only adds semantic properties or embeds the concept denoted by the root into the larger linguistic context' (Croft, 1990:176), as in *cap-ko sipta* 'want to catch'. The order of aspectual meanings added by each auxiliary verb is also determined by the concatenating rules that we have examined in 4.2.2.

Thus, in the above relative clause the order of verbal suffixes is as follows:
Verb stem – passive – causative – aspect – desiderative – negation – honorific -relativizer (tense and aspect encoded)-HEAD NOUN

When the verb phrase is modified as the relative clause, by suffixing the relativizer onto the last verb stem, the linear ordering of the elements in the relative clause and its head noun exhibits the 'iconicity of distance'. Otto Behagel (1932) explains this syntactic phenomenon as 'This is the most important principle: that which is closely correlated mentally will also be closely associated physically' (cited in and translated by Newmeyer 1998:116). Along the same principle, Greenberg (1963:103) also notes the significance of linear ordering in syntax, commenting that 'the order of elements in language parallels that in physical experience or the order of knowledge'.

When Bybee studied fifty language samples for iconic-distance in the ordering of verbal affixes, she found that the proximity of elements is directly related to their semantic relationships. Her findings are particularly relevant to the Korean verbal phrase and the relative clause construction, which she describes:

> While elements whose position is defined in terms of the position of the verb would have meanings that modify or relate some way to the meaning of the verb or verb stem. Similarly, elements whose position is determined with respect to the whole clause would have the entire proposition in their semantic scope (Bybee, 1985:II).

We can observe the 'Iconicity of distance' in the following relative clause.

(4.34) koyangi-eykey cui-lul [cap-hi-key hay-e cwu-ko sip-ci anh -usi-n] apeci
cat-to mouse-ACC catch-passive-causative-aspect(benefaction)-
aspect(desiderative)-negation-honorific -REL father
'My father who doesn't want the mouse to get caught by the cat'

The verbal expansion in the above relative clause illustrates that grammatical information is processed step-by-step, registering the concept denoted by each grammatical morpheme. The concepts that are critical to the core event verb are closer to the verb in the passive and causative order. The aspectual modification is added by each auxiliary verb, but they are not directly relevant to the core event verb as valence (transitivity) or voice. This is because aspect applies to the verb phrase rather then the verb (Croft, 1990:177). Therefore the position of aspect is after valence. The exception is when a descriptive verb is changed to a processive verb by suffixing the inchoative *–a,e,ye hata*. Then the meaning is altered drastically, i.e. from *cohta* 'to be good' to *cohahata* 'to like'. In this case, the aspectual inflection occurs after the verb stem and before the causative. The negation applies to the whole string of verb phrases, farther from the content verb but closer to the head noun since it affects the interpretation of the relative clause. The honorific suffix is not relevant to the verb. Therefore it is the most distant from the core content verb but is the closest to the head noun, since it is directly related to the head noun, which is *apeci* 'father' in this case. Most importantly, the relativizer is bound to the last suffix positioned immediately before the head noun, which indicates that the relativizer is conceptually closest to the head noun.

This complex grammaticalization in the verb phrase reveals that each grammatical morpheme is directly related to conceptualization. Conceptual closeness or distance is plainly evident in the construction of the relative clause and its head noun in Korean. Bybee's (1985) major work on the semantic determinants of inflectional expressions clearly demonstrates this phenomenon. Newmeyer (1998:116) summarizes the relationship that:

> ... the more relevant an inflection is to a head, the closer it is likely to be to that head and the more likely to be bound to that head (as opposed to occurring as an independent word), where the 'relevance' of an inflection is measured in terms of the degree to which it directly modifies the head.

Below is Bybee's ranking of conceptual closeness of inflectional affixes to the verb which is congruent with the order that I presented for the Korean verbal affixes, (disregarding language-specific suffixes such as person, number and honorific).

> Valence<voice<aspect<tense<mood<person/number agreement
> (leftmost = conceptually closest) (Bybee, 1985:24-25; Croft 1990:177)

In sum, the linear order of elements in the verb phrase and relative clause reflects how the event proceeds, or is perceived in a temporal, experiential sequence. In other words, 'Iconicity of order is illustrated by the fact that the order of morphemes or words tending to reflect logical relations among their referents' (Newmeyer, 1998:117).

Langacker (1997:249) identifies the critical aspect of conceptualization:

> Conceptual structure emerges and develops through *processing time*; it resides in *processing activity* whose temporal dimension is crucial to its characterization. A dynamic view of conceptualization is essential to a principled understanding of grammar and how it serves its discourse and interactive functions.

Langacker also argues that this processing involves not a single ordering or concept, but the multifaceted character of conceptualization, typically comprising numerous cognitive domains, many structural dimensions, and multiple levels of organization. As evidenced by the examples that have been examined, Newmeyer's observation that 'in the realm of syntax, conceptual and structural complexity tend to go hand in hand' (Newmeyer, 1998:117) holds true for Korean. The following section discusses the processing of head-final relative clauses in Korean.

4.3 Processing the relative clause and the head noun in Korean

4.3.1 Semantic constraints between the relative clause and the head noun

What are the implications in terms of grammatical and semantic relationships between the relative clause and the head noun when the relative clause precedes the head noun? A number of linguists have argued that the relative clause in Korean is

constrained by the head noun (H.S. Lee, 1990; J.I. Han, 1992; J.B. Kim, 1998). In this section, I will take each argument and show that in fact the reverse is the case.

J.B. Kim adopted Sag's (1997) Head-driven Phrase Structure Grammar Theory for English relatives, and argued that the head noun's lexical information has a crucial role in putting constraints on the relative clause in Korean. This can be traced by the empty element which is not realized phonetically. However, he acknowledges that the unacceptability of the following examples is due to semantically constraint-based and context dependent reasons.

(data from Na and Huck 1993 in J.B. Kim 1998:789 (48.a.b.))

(4.35) a. *[John-i manna-n yenpil]
John-NOM meet-REL pencil
'(lit) the pencil that John met'

b. *[nol-i yeppu-n yenpil]
dawn pretty-ATTR pencil
'(lit) pencil whose sunset is pretty'

In the light of processing theory, an alternative explanation can be considered for the semantic constraints between the relative clause and the head noun in Korean. As discussed earlier, processing is essentially incremental, as the sentence is generated from left to right in real time. Therefore, the semantic information is processed through different grammatical forms (Bybee, 1985).

In the relative clause [*John-i manna-n*] 'who John met', there are three different types of grammatical information available on-line; the nominative particle *–i* attached to 'John' which indicates that the noun phrase is the subject of the sentence; the transitive verb *manna-* 'to meet' which denotes the lexical value and an argument structure which requires an object; and the clausal ending, the relativizer *–n*, provides tense and aspect information and sets a clausal boundary. The relative clause [*John-i manna-n*] looks to the head noun for agreement features, which will fulfil the grammatical requirements – an object that is semantically agreeable.

In order to understand the relationship between the relative clause and the head noun, let us consider how language processing works. Language production involves

a very efficient procedure. Levelt (1989:9) devised a model of language production comprising three stages:

> **Conceptualization** is the first stage when the speaker conceptualizes the information before production by " ... conceiving an intention, selecting the relevant information ..., ordering this information for expression, keeping track of what has been said before, and so on."
> **Formulation** is the next stage, which the speaker "... accepts fragments of messages as characteristics of input and produces as output a *phonetic or articulatory plan.* In other words, the Formulator translates conceptual structures into a linguistic structure,"
> **Articulation** is the final stage, when the message is phonetically articulated.

As each lexical and grammatical element is generated on-line from left to right, it goes through the mental register of the producer and the receiver of the message. Langacker (1997:250) describes this as comprising two mental processes:

> 'sequential scanning' is when we follow an event and 'we track an evolving relationship by scanning through time'
> 'summary scanning' is that 'through memory, we also have ability to mentally superimpose the successive stages of such an event, progressively building-up a more and more elaborate conception'.

As a result of the mental processing which occurs by the participants, it is possible that even 'the next processor can start working on the still-incomplete output of the current processor...' (Levelt, 1989:24).

When the relative clause, [*John-i manna-n*] is processed, the built up conceptions through the lexical and grammatical information enables the processor to predict that the subsequent head noun would be an animate (human) noun phrase such as *chinkwu/sensayng/yeca* 'friend/teacher/girl', but not something like *yenpil/kepi* 'pencil/coffee'. By the same token, if it were in English, the processor would not select a relative pronoun such as 'who' 'whom' or 'whose' for the head noun 'the pencil', but select 'which' or 'that'.

The critical point to note here is that processing is essentially incremental in not only lexico-grammatical form but also conceptualization. It has been demonstrated by Marsen-Wilson and Tyler's (1980) studies that 'in on-line processing, semantic representation is constructed by the comprehension system before grammatical structures have been entirely processed' (cited in Pienemann, 1998:58).

H.S. Lee (1990:93) also argues that the relative clause is within the influence of the head noun syntactically and semantically since the relative clause is a component of a phrase, which the head noun belongs to. Therefore, the relative clause must provide an appropriate description of the head noun. The problem with this argument is that it ignores the processing aspect of relative clause construction whereby the relative clause in Korean always precedes the head noun. Hence, the head noun cannot be encountered before the relative clause is fully formed.

It makes perfect sense in English, as a head-initial language, that the relative clause must be an appropriate description of the head noun. Since the argument is expressed by the head noun first, it is the function of the relative clause to provide background information about the head noun. Therefore, the description must be semantically appropriate to the head noun. The following simple relative clauses illustrate the point.

(4.36) a. the house which is two storey/*a detective story/*a trainee/*a fruit cake
b. the book which is *two storey/a detective story/*a trainee/*a fruit cake
c. the salesperson who is *two storey/*a detective story/a trainee/*a fruit cake
d. the cake which is *two storey/*a detective story/*a trainee/a fruit cake

Han (1992) also argues that relativization in Korean involves a syntactic movement of an empty relative operator and is constrained by the subjacency condition. He uses the following examples to highlight the subjacency condition, which accounts for the ungrammaticality of (4.37a).

(4.37) a. *John-i mul-un kay-lul chacanay-n namca
name-NOM bite-REL dog-ACC identified-REL man
*'the man who, identified the dog which John bit' (Han, 1992:341).

In (4.37a), the relative clause [*John-i mul-un*] 'which John bit' has a number of pieces of grammatical information on-line:

i) the noun phrase *John-i* indicates the subject

ii) the transitive verb *mul-* 'to bite' projects an argument structure that needs an object

iii) the relativizer *–un* signals that a noun follows as well as the tense and aspect information encoded (which is the past perfect in this case).

The relative clause 'which John bit' is characterized as modifying the noun, which in agreement. The ungrammaticality of (4.37a) is due to the simple fact that normally humans do not bite dogs. This is the semantic and contextual constraint. If the head noun *kay* 'dog' is replaced with *aki* 'baby', the syntactic structure remains the same and it is perfectly grammatical as in (4.37b), since it is possible that a little boy might bite a baby.

(4.37) b. John-i mul-un aki-lul chacanay-n namca
name-NOM bite-REL baby-ACC identified-REL man
'the man who identified the baby whom John bit.'

In Han's other example (4.38), the clause is grammatical up to [*John-i chackoiss-nun salam-ul manna-n*] '?? met the person John was looking for'. Only the head noun, *pomwul* 'treasure', makes the sentence ungrammatical.

(4.38) a*John-i chac-koiss-nun salam-ul manna-n pomwul
name-NOM look for-PRG-REL person-ACC met-REL treasure
*'the treasure[which [John met [the person [who was looking for]]]]

The projected lexical and grammatical information of the subject (agent), verb and object (theme), together with other information such as the relativizer are available in the complex relative clause. When the relative clause, [*John-i chacko iss-nun salam-ul manna-n*] is processed, 'the lexical information stored with the entry for the verb has to 'communicate' with other constituents in the sentence' (Pienemann, 1998:63). By the time [*John-i chacko iss-nun salam-ul manna-n*] is processed, the

conceptualized message is looking for a noun, most likely referring to a place, a time or a person as in (4.38b):

(4.38) b. John-i chac-koiss-nun salam-ul manna-n hakkyo/achim/chinkwu
name-NOM look for-PRG-REL person-ACC meet-REL school/morning/friend
'the school where (I) met the man John is looking for'/
'the morning when (I) met the man John is looking for'/
'the friend who met the man John was looking for'

Contrary to Han's argument, Yang (1987:31) had difficulties in explaining the grammaticality of the following examples using Chomsky's Adjacency Principle and proposed a hypothesis that 'an inalienable possessor NP is properly governed by its head in an NP'.

(4.39) a. son-i khu-n salam
hand-NOM big-ATTR person
'the person whose hands are big'

b.?*ot-i khu-n salam
clothes-NOM big-ATTR person
'the person whose clothes are big'

c. *yenpil-i khu-n salam
pencil-NOM big-ATTR person
'the person whose pencil is big' = 'the person who has a big pencil'

He explained that (4.39a) is grammatical because *son* 'hand' has an inalienable relationship with *salam* 'person' and *ot* 'clothes' may be in such a relationship depending on the situation, whereas *yenpil* 'pencil' has no such relationship with a human, therefore the clause is ungrammatical.

In the context of the processing principles, an alternative explanation can be proposed for the ungrammaticality of the above three examples. For example, when a person encounters the relative clause, [*son-i khun*] '(whose) hands are big', the processor has conceptualized a message from the lexical and grammatical

information. The lexicon is the first information that goes into the conceptualization process and then the grammatical morphemes encode the concept, thus creating a phrase with elaborated concepts. This process occurs autonomously (Levelt, 1989). Levelt (1989:181) argues that "... the lexicon is an essential mediator between conceptualization and grammatical ... encoding ...". From the relative clause, [*son-i khun*], the following lexical and grammatical information is available:

lexicon *son* 'hand' = noun
functor, particle *i* = subject particle
lexicon *khu-* 'be big' = descriptive verb
functor, *-n* = attributive modifying ending

According to Pienemann (1998), the processing procedure in the sentence is first activated by the noun, and then the verb 'knows' the argument structure; subject, direct object and indirect object, which identify thematic roles such as 'agent', 'theme' and 'goal'. In parallel with this process, 'the conceptual arguments fulfil certain thematic roles in the message' (p. 63).

Langacker (1997:250) further explains this processing:

> The holistic view afforded by summary scanning also figures in the conceptual reification by virtue of which an event is coded with a noun and can even be characterized by a shape-specifying adjective, as in *straight flight* or *zig-zag trajectory.*

In the processing procedure, a noun which possesses *khun son* 'big hands' is anticipated, as in (4.39a). It would not be in the processor's conceptual domain to anticipate nouns like *say* 'bird' or *cha* 'car' or *hakkyo* 'school' as in (4.39b) because they do not possess hands.

(4.39) a'. son-i khu-n salam/ai/tongsayng/namca . . .
hand-NOM big-ATTR person/child/brother/man
'the person/child/brother/man whose hands are big'

b'. *son-i khu-n say/cha/hakkyo
hand-NOM big-ATTR bird/car/school
*'the bird/car/school which has big hands

As Pienemann explains, the processing starts from the lexical information *son* 'hand' and with the subject particle *–i* to form a noun phrase denoting the subject and with the attributive adjective *khun*, they now form a relative clause which looks to a noun that is semantically agreeable to the relative clause. The ungrammaticality of the other two (4.39b) and (4.39c) is because when the relative clauses [*os-i khu-n*] '(whose) cloth is big' and [*yenpil-i khu-n*] '(whose) pencil is big' are processed, the head nouns failed to meet matching diacritic features (Pienemann, 1998). As Levelt (1989) argues, language production is essentially driven on the one hand by conceptualization, and on the other by the lexicon.

4.3.2 Processing of the left-branching relative clause

In this section, we examine how the head-final and left-branching characteristics of Korean process the relative clause within the sentence structure. According to the Principal of Branching Direction (Lust, 1983), Korean is left-branching, as the phrase structure is recursively preposed to the left in terms of the tree diagram (See p. 119). Dryer (1992:133) pointed out that

> The effect of the BDT is that languages tend towards consistent left-branching or consistent right-branching, and structures with a consistent direction of branching are easier to process than structures that involve a mixture of left-and right-branching (BDT=Branching Direction Theory).

The most significant implication of processing the head-final and left-branching relative clause is that the identification of the head noun is not possible until the relative clause ends, whereas in head-initial languages like English, the relative clause begins with the head noun. Due to humans' short memory constraints (Slobin, 1971; J. Hawkins, 1988), language processing must occur in an extremely fast and efficient manner (Pienemann, 1998). Two of the basic parsing principles of human sentence processing are observed below:

Efficiency Principle (EP) 1

The processor should utilize any information on line as soon as it becomes available. This principle implies that keeping already available information unused during on-line processing would not be very efficient and that human beings make parsing decisions as quickly as possible.

Efficiency Principle (EP) 2:

Backtracking and reanalysis will be costly. (Mazuka and Lust, 1990:166)

Parsing right-branching languages like English is generally a top-down and left-to-right process with a 'head', which determines constituent structure (both its position and its level), generally precedes the rest of the phrase' (Mazuka and Lust, 1990:167). The 'top down' procedure is defined as "A tree is built from an input string by starting with the initial symbol of the grammar (that is topmost in all trees generated by the grammar) and building a tree downward to the terminal symbols." (Kimball, 1973:19 cited in Mazuka and Lust, 1990:166). We can see this in the following example in which the heads are in bold letters:

(4.40) **When** you go home, **before** you have dinner, **which** is already cooked, please ring your mother **who** is waiting for your call.

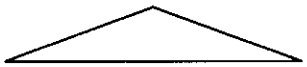
On the contrary, left-branching languages like Korean and Japanese do not have conjunctive headers for subordinating clauses and they are therefore assumed to be more difficult to parse. Mazuka and Lust (1990) address this problem in Japanese, which has head-final and left-branching language characteristics, and SOV word order. In particular, the relative clause in Japanese poses significant parsing problems since there is no mechanism available for the equivalent relativizer in Korean or the relative pronouns in English. Therefore, it would be impossible to determine the depth and the type of embedding. Mazuka and Lust (1990: 168) note this problem in Japanese:

> As there is no marking on the verb, and any argument could be elliptic, a relative clause is indistinguishable from other finite clauses until the relativized noun is encountered.

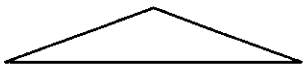
They use the following example to highlight the recursive tendency in left-branching relative clause constructions.

(4.41) Taroo-ga katte iru inu-ni oikakerareta kodomo-o dakiageta otoko ga
name-NOM keeps dog-DAT was chased child-ACC lifted up man-NOM
"The man who lifted up the child who was chased by the dog Taroo keeps..."

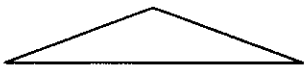
Japanese otoko-ga
Korean namca-ka
man-NOM



kodomo-o dakiageta
ai-lul an-a-oli-**n** 'who lifted up the child'
child-ACC lifted-up-REL



inu-ni oikakerareta
kay-eykey ccot-ki-**nun** 'who was chased by the dog'
dog-to chased-be-REL



Taroo-ga katte iru
Taroo-ka kilu-**nun** 'which Taroo keeps'
name-NOM keep-REL

Taroo-ka kilu-**nun** kay-ekey ccotki-**nun**
[[Ø[Ø[[Taroo- gaØ katte-iru] inu- ni] oikakerareta]
name NOM keeps-REL dog-DAT is chased

ai-lul ana-oli-**n** namca-ka
kodomo- o] dakiageta] otoko- ga] ...]
child-ACC lifted-up-REL man-NOM

'The man who lifted up the child who was chased by the dog Taroo keeps . . .'
(Mazuka and Lust (1990: 168, cf. Kuno, 1973); the Korean equivalent added)

Evidently the Korean version has exactly the same word order as in Japanese, which shows the recursive left-branching relative clause construction. The notable feature is the relativizer (in bold letters), which is marked at the end of each verb phrase in Korean. Clauses are built from the lowest level and a new clause is added on to the previous clause.

Mazuka and Lust (1990:171) point out that serious potential parsing problems are inevitable if the same parsing strategies as English are used for Japanese.

> Since in Japanese, the head is not available until after the phrase is completed, this critical information for phrase identification and configuration will not be available initially in on-line processing in Japanese. ... It can be seen from these facts, that on-line top-down organization of parsing procedures in Japanese will inevitably lead to massive back-tracking (thus offending EP 2) if decisions are made quickly in left-to-right order in accord with EP 1.

They argue that due to the major grammatical differences, it may be better to have 'top-up' parsing for right-branching languages and 'bottom-up' parsing for left-branching languages. They define bottom-up parsing as follows:

> In parsing organized according to 'bottom-up' principles, hypotheses about constituent structure of lower constituents are sequenced before hypotheses about the relation of such constituents to higher constituents.
>
> Specifically, the parse tree is built from the lower node up. In particular, clauses are built from the lowest one and a new clause is placed above the previous clause (Mazuka and Lust, 1990:179).

Although Korean, as a left-branching language, has many syntactic characteristics that are similar to Japanese, it also has different characteristics compared to Japanese, especially in regard to parsing relative clauses. Korean utilizes the relativizer, which is suffixed to the verb stem to join the relative clause and the head noun, with the tense and aspect encoded. In fact, not only the relativizer but also all

phrase enders are obligatory in Korean. We can see a stark contrast between the clause headers in English and clause enders in Korean as in (4.40) and (4.41):

(4.40) **When** you go home, **before** you have dinner, **which** is already cooked, please ring your mother **who** is waiting for your call.

(4.41) cip-ey ka-**myen** imi cie noh-**un** cenyek-ul mek-**ki ceney**
home-to go-when already cooked-REL dinner-ACC eat-before
'When you go home, before you have dinner,

cenhwa-lul kitali-ko iss-**nun** emeni-kkey kkok cenhwaha-si-eyyo.
phonecall-ACC wait-ing-REL mother-to please ring-HON-END
'please ring your mother who is waiting for your call.'

Mazuka and Lust (1990) propose "Branching Direction" as a parameter that can explain the parsing of left-branching languages as well as right-branching languages. Top-down parsing is inefficient for explaining left-branching languages and bottom-up parsing is similarly inefficient for right-branching languages. The SOV/SVO word order and head-final/head-initial characteristics are the major syntactic differences, which force speakers to adopt different parsing procedures.

After examining word order correlations on a sample of 625 languages, Dryer (1992) reports that branching direction is most convincingly correlated with word order. Languages tend to be consistently right-branching or consistently left-branching. This has proved to be correct in the case of Korean.

In language processing, however, there must be universal parsing principles that account for both left-branching and right-branching languages, because languages are produced and comprehended on-line in real time through processing, regardless of their branching directions. Frazier and Rayner (1988), who argue against the assumption that left-branching adds processing complexity, thus propose universal constraints: the Left-to-Right Constraint, the First Analysis Constraint, the Maximal Chunk Constraint and the Bounded Complexity Constraint (1988:263). Of these, the Left-to-Right Constraint is the fundamental principle for both branching-direction languages. The Left-to-Right Constraint holds that 'each item is incorporated into a

constituent structure representation of a sentence (essentially) as the item is encountered'. J. Hawkins (1994:116) described this phenomenon,

> The linear sequence of words and morphemes in the parse string gradually enables the hearer to recognize structural groupings of words, i.e. mother, daughter, and sister relations, via parsing principles such as Mother Node Construction (3.3) and Immediate Constituent Attachment (3.4), and to distinguish the intended structure from other possibilities. These structural groupings are then vital prerequisites for semantic interpretation, which is a highly structure–dependent process (cf. The principle of Structural Determination (2.34), and for pragmatic processing).

In the construction of the relative clause in Korean, a long recursive, left-branching relative clause will delay the identification of the head noun. However, unlike Japanese, the relativizer in Korean as a clause ender provides vital parsing cues that enable the parser to recognize and parse the relative clause in the sentence structure. We will examine this in the next section.

4.3.3 The role of the relativizer in processing

One of the major differences between English and Korean in the formation of the relative clause is that English has relative pronouns and Korean has the relativizer, which I have discussed in Chapter 2. The following is a summary of the different characteristics of the two systems of relativization.

Table 4.4 Comparison of the relativizer and the relative pronoun

	Korean Relativizer	English Relative pronoun
Position	Clause-final before the head noun	Clause-initial after the head noun
Form	Grammatical morphemes suffixed to the final verb stem	Lexicon
Functions	Joining the RC and the head noun Marking tense and aspect	Joining the head noun and the RC Marking case
Presence	Obligatory	Obligatory except the object noun phrase

Despite these contrasting characteristics, one feature appears to be the same; both the relative pronoun and the relativizer are adjacent to the head noun. As discussed earlier in 4.2.4.3, the phenomenon of positioning the relative pronoun adjacent to the head noun is due to the iconic principle, whereby ideas that are closely connected tend to be placed together (Haiman, 1985). In other words, conceptual closeness is responsible for the position of the relative pronoun in regard to the head noun (Haiman, 1985; Newmeyer, 1998). In 4.2.5, I have demonstrated that this notion also applies to the relativizer, which is positioned immediately before the head noun.

The relative pronoun in English, which is positioned after the head noun, clearly signals the subordinate status of the clause. For example, the relative pronoun 'whose' after the head noun, 'Peter', sets up a different relative clause in structure and meaning from the other relative pronouns 'who' or 'whom', as below:

(4.43) a. I saw Peter whose [brother is my classmate].
b. I saw Peter who [is my classmate's brother].
c. I saw Peter whom [I play football with].

In addition to expressing the case of the head noun, the relative pronoun also identifies its animacy by using 'who', 'whose' and whom' rather than 'which' or 'that' (Celce-Murcia and Larsen-Freeman, 1983).

In contrast to English, the relativizer in Korean is in clause-final position, which means the signaling function of the relative pronoun is not available in Korean. What J. Hawkins (1994:325) has noted for Japanese is partially true in Korean.

> A head-final language, on the other hand, will not be able to signal immediate matrix disambiguation via a complementizer if the complementizer stands on the right periphery of its clause. In the processing of Japanese the parser has to wait for evidence about subordination, and it cannot immediately assign matrix or subordinate status to each new S encountered. ... The result is considerable on-line ambiguity. ...the huge number of structural options that are potentially available in a bottom-up parse, most of which the hearer is psychologically unaware of.

As explained, the existence of the relativizer and other clause enders in Korean makes parsing in Korean different from Japanese. The table below shows the types of embedded clauses with their respective clause enders. Clause enders are all suffixed to the verb stem, except for the quotative clause, which needs to have a predicate with a neutral-level sentence ender (e.g., declarative, interrogative, propositive and imperative) and a connective particle (H.M. Sohn, 1999):

Table 4.5 Types of embedded clauses

Types	Clause ender	Examples
Conjunctive	VS+suffix	*–se* 'and then', *–ya* 'only if', *–to* 'though' *–le* 'in order to', *–key* 'so that', *–taka* 'while'
Relative	VS+relativizer	*–nun, –(u)n, –ten, –(u)l*
Complement	VS+complimentizer	*–nun, –(u)n, –ten, –(u)l*
Nominalized	VS+nominalizer	*–ki, –(u)m*
Quotative	Vend+particle	Vend+*ko*

The function of each type of subordinate clause is different in Korean:

> They either modify the head noun (in relative constructions) or the main predicate (in complement and quotative constructions), or function as a nominal constituent in a clause or sentence (in nominalizer constructions) (H.M. Sohn, 1999:304).

The following examples show possible subordinate clauses after simple SOV sentence elements. The clause enders are in bold letters:

(4.44) Anne-i Bob-ul manna-
name-NOM name-ACC meet-

Conjunctive clause:

a. Anne-i Bob-ul manna-**myen** . . . . .
name-NOM name-ACC meet-if
'If Anne meets Bob . . .'

Relative clause:

b. Anne-i Bob-ul manna-**n** nal
name-NOM name-ACC meet-REL day
'the day which (when) Anne met Bob . . .'

Compliment clause:

c. Anne-i Bob-ul manna-**n** sasil . . .
name-NOM name-ACC meet-COM fact
'the fact that Anne met Bob . . .'

Nominalized clause:

d. Anne-i Bob-ul manna-**ki** sicakha-yess-ta.
name-NOM name-ACC meet-Nom begin-PAST-END
'Anne started meeting Bob.'

Quotative clause:

e Anne-i Bob-ul manna-**ntako** tul-essta.
name-NOM name-ACC meet-QUO hear-PAST-END
'I heard that Anne sees Bob.'

When a Korean speaker utters or hears a, b, c, d, and e, '*Anne-i Bob-ul* . . .', there is no signal about what message or what type of clause will follow. Until the verb stem *mana-* encounters various clause enders, such as *–(u)myen* 'if', *–ki* the nominalizer, *–ntako* the quotation particle, the grammatical function of the clause is not determined. The clause ender establishes the syntactic and semantic relation between the embedded clause and its head noun (H.M. Sohn, 1999). The relative clause is constructed only after the verb phrase is suffixed by the relativizer *–n*, otherwise there is no indication of the type and the depth of the embedding clause. However, when the relative clause is finally constructed, the relativizer, which is a non-final modifier, behaves like a case marker specifying the grammatical function of the clause, and looks for a semantically agreeable noun.

Relative clause:

(4.44b) Anne-i Bob-ul manna-**n** nal
name-NOM name-ACC meet-REL day
'the day which (when) Anne met Bob . . .'

If we re-examine the above relative clause, we see that after each noun a case particle is attached; the subject particle *–i* is attached to Ann indicating that Ann is the subject of the sentence; likewise the object particle *–ul* is attached to Bob indicating that this is the object. It is perfectly grammatical and there is no change in the meaning if the word order is altered by fronting the object:

(4.44.b') Bob-ul Anne-i manna-**n** nal
name-ACC name-NOM meet-REL day
'the day which Anne met Bob . . .'

This, so-called free word order is possible because of the function of particles. Since clause enders perform similar functions to particles in sentence structure, it is necessary to look at the functions of particles:

> Particles are postpositional function words that either indicate the syntactic relation of the cooccurring element with other constituents of the sentence, delimit the meaning of the element to which they are attached, or perform some other function such as plurality, conjunction, quotation, or politeness. As postpositions, particles follow a nominal (noun, pronoun, or numeral), a nominal phrase or nominalized clause, an adverb or adverbalized clause, or a sentence. (H.M. Sohn, 1999:212-213)

The major difference between particles and clause enders is that clause enders are suffixed onto the verb or verb phrase, whereas particles are mainly attached to nouns and nominal phrases.

As far as parsing subordinate clauses is concerned, English has advantages because:

> In general, the head of a phrase in English carries essential information both as a leading edge of a phrase (opening bracket) and the identifying the

position of the phrase with regard to the rest of the tree (Mazuka and Lust, 1990:171).

We can see this in (4.45), where the subordinate conjunctions, 'when' and 'after' signify the depth of these clauses.

(4.45) [[When [after Bob finally went to school] he met with the teacher], he told her that he could not come that night]
(Mazuka and Lust, 1990:173, (8)).

When we translate (4.45) into Korean, it is clear that each conjunctive marker sets clausal boundaries at the end of the clause.

(4.45a) tutie Bob-i hakkyo-ey ka-**n** **taum**
finally name-NOM school-to go-REL after
'after Bob finally went to school'

sensayngnim-ul manna-ass-**ul-ttay**
teacher-ACC meet-PAST-when
'when (he) met with the teacher'

khu nal cenyek-ey o-l swu ep-**tako**
that day night-on come-can not-QUO
'that (he) could not come that night'

malha-yess-ta.
tell-PAST-END
'(he) told (her)'

As demonstrated, in the processing of Korean sentences, clause enders, including the relativizer, function like case particles which are attached to the noun and specify the grammatical role of the noun in the sentence (e.g., nominative, Accusative, dative, locative, ablative, source, goal, instrument, and directional). Similarly, clause enders suffixed to the verb stem specify the grammatical role of the verb phrase and set the

clause boundary in the sentence. J. Hawkins (1994:433) counts this function in the constituent structure as one of the major findings in his work, 'A Performance Theory of Order and Constituency':

> (7.5) Heads of phrases are constructing categories in parsing whose grammatical properties are motivated by the need to recognize the nature of the phrasal category that dominates a set of ICs in the parse string. (IC=Immediate constituent)

The clause ender is obligatory in Korean as is the sentence ender. Therefore, in every clause, there is a clause ender with specific grammatical information with a particular semantic function to distinguish the category of clause. If we look at the following examples again, neither the English nor the Korean sentences are in temporal order. The event described in the second clause in English and in the third clause in Korean will happen last. The difference in order between the two languages is due to their different head-initial/final characteristics.

(4.39) (2)**When** you go home, (4)**before** you have dinner, (1)**which** is already cooked, (3)please ring your mother **who** is waiting for your call.

(4.40) (2)cip-ey ka-**myen** (1) imi cie noh-**un** (4) cenyek-ul mek-**ki ceney**
home-to go-when already cooked-REL dinner-ACC eat-before
'When you go home, before you have dinner,

(3)cenhwa-lul kitali-ko iss-**nun** emeni-kkey kkok cenhwaha-si-eyyo.
phone call-ACC wait-PRG-REL mother-to please ring-HON-END
'please ring your mother who is waiting for your call.'

The problem of any misalignment between linearity and processing can be resolved as 'incremental processing necessitates the use of *storage facilities* to allow for non-linearity in the matching of underlying meaning onto surface form' (Pienemann, 1998:58). To make this happen, the unit of the clause plays a critical role assigned by clause headers and enders, and 'it is the categorical procedure itself that chooses its

functional destination' (Pienemann, 1998:69). Halliday (1985:101) explains this function of clause:

> A fundamental property of language is that it enables human beings to build a mental picture of reality, to make sense of their experience of what goes on around them and inside them. Here again the clause is the most significant grammatical unit, in this case because it is the clause that functions as the representation of processes.

Mazuka and Lust (1990:182) also note that the clause serves as a basic parsing unit for both left-branching and right-branching languages. In Piennemann's (1998:211) Processing procedures, the subordinate clause is at level 6, the last level in the processability hierarchy. This confirms that the relative clause has semantic constraints on the head noun, as the clause ender categorizes the clause even before meeting the head noun.

4.4 Summary

In this chapter, I have examined the processing of the relative clause in Korean, which has head-final, left-branching characteristics, with the relativizer in the clause-final position. I have demonstrated that the linear ordering of elements in the verb phrase in Korean is based on logical grammaticalization, which reflects how the event is progressed or perceived in a temporal, experiential sequence. The syntactic and semantic function of the auxiliary verb in the verb phrase is centrally important in establishing the semantic relationship between the relative clause and the head noun. The iconicity of distance holds true in relative clause construction in Korean, showing the conceptual closeness and distance in the ordering of elements in the relative clause, with respect to both the core content verb and the head noun.

Based on processing theory, I have shown that, in Korean, the semantic constraint is not set by the head noun on the relative clause but by the relative clause on the head noun. This claim is based on two fundamental facts:

1) Processing is incremental from left to right and is on-line in real time
2) The relative clause precedes the head noun in Korean.

As lexico-grammatical information is processed, the processor also builds up the conceptualization. In fact, we now know that processors construct semantic frames

before grammatical structures. In other words, the head noun cannot affect the relative clause semantically or syntactically in Korean because of its position in the linear ordering of the relative clause construction.

I have shown that branching-direction theory is able to explain the processing of relative clauses in Korean, as all subordinate clauses occur recursively to the leftward in a bottom-up manner. However, I have suggested that the clause enders, including the relativizer in Korean, have a significant function in categorizing the constituents when parsing sentences. This function is similar to the functions of case particles.

This chapter has shown that J. Hawkins' (1994:439) grammatical theory works in this particular Korean structure.

> More generally, the very autonomy of syntax may owe its existence to the need to make semantics processable for both the speaker and the hearer, and it remains to be seen whether any precision can be given to the formula: semantics + processing = syntax.

Chapter 5 Problems in the acquisition of relative clauses in Korean and the order of difficulty

5.1 Introduction

This chapter reports the findings of a quantitative study, which aims to identify problems in the acquisition of relative clauses in Korean as an L2, and to determine the order of difficulty in the relativization of noun phrases. The order is then tested against the Noun Phrase Accessibility Hierarchy (NPAH) proposed by Keenan and Comrie (1977) and also against other current research findings.

When learners encounter relative clauses, their L1 and L2 may or may not differ in the formation of relative clauses. These differences may include: 1) adjacency to the head noun, 2) retention and omission of the relative clause marker, 3) ordering of the relative clause with respect to the head noun, 4) case marking on the relative marker, (variable vs. invariable) and 5) pronoun retention or omission (Gass, 1979:33).

The characteristics of the relative clause in Korean present challenges for learners of Korean as a foreign/second language. Among the head-final and left-branching characteristics of the relative clause, the relativizer in Korean is unique, as it is in the form of a grammatical morpheme encoded in the verb, expressing tense and aspect. There have been very few studies on the acquisition of relative clauses in Korean as an L2 by adults, or on relativizers with similar characteristics in other languages. This study aims to produce new findings so that another typologically different language can be included in studies of universal typology.

This study focuses on the use of the relativizer in the formation of relative clauses. In order to measure learners' knowledge of relative clauses in the acquisition of Korean, the data was elicited by three tasks: a completion task, a grammaticality judgment task (hereafter GJ task) and a combination task. Even though the relativizer is only one aspect of relativization, the findings will provide an indication of the subjects' knowledge of Korean relative clauses generally, as R. Hawkins (1989) noted in his study. In this chapter, we first briefly review research on the L2 acquisition of relative clauses. A description of the methodology of this study is then provided and finally the results are presented and discussed.

5.2 Studies on the L2 acquisition of relative clauses

5.2.1 The NPAH and the order of difficulty

In relating the NPAH to L2 language acquisition, the essential question is whether a typological universal such as the NPAH has any effect on the L2 acquisition process. As an implicational hierarchy, the NPAH is a reflection of linguistic complexity of a language in regard to syntactic structure. It also indicates frequency of occurrence (J. Hawkins 1994:xii). In other words, higher positions on the hierarchy such as SU (Subject) and DO (Direct Object) are linguistically less complex and more frequently produced than those on lower positions of the hierarchy such as GE (Genitive) and OCOMP (Object of Comparison). The NPAH can be also interpreted as follows:

> ... restrictions on the language knowledge of the individual: the mind permits certain combinations of relative clause and precludes others. In this sense the AH is not just a matter of processing but is in addition a description of linguistic competence (Cook 1993:151).

5.2.1.1 Pronoun retention and L1 transfer

A number of studies have claimed that the sequence of L2 acquisition corresponds to the NPAH, suggesting the existence of a relationship between the NPAH and the order of difficulty in L2 acquisition. One of the earlier studies in this field was Ioup and Kruse's (1977) study, which examined L1 transfer in the acquisition of relative clauses in English, using a grammaticality judgment task. The study found that there was not enough evidence to prove L1 transfer, since pronoun retention occurred in all subjects regardless of their L1 (Arabic, Chinese, Japanese, Persian and Spanish). However, the study found that pronoun retention occurred in more marked positions OP and GE (Marked positions will be discussed in 5.2.1.2).

Gass's (1979) study also examined the occurrence of L1 (Arabic, Chinese, French, Italian, Korean, Persian, Portuguese, Japanese and Thai) transfer in the acquisition of English relative clauses. Language transfer in the acquisition process is concerned with the view of whether 'patterns of the NL (of all levels of linguistic structure), including both forms and functions of elements, are superimposed on the patterns learned in a second language' [NL=native language p. 328]. She tested the hypothesis, which states that the more accessible positions on the NPAH should be produced with greater frequency and accuracy (p. 339). She found that pronoun

retention was the only variable which showed L1 transfer. It occurred in three marked positions OP, GE and OCOMP.

Hyltenstam (1984) also reported that when speakers of Finnish, Spanish, Greek and Persian learned Swedish, pronoun retention occurred in the more marked positions, though GE and OCOMP were reversed, as it occurred more often with GE than the more marked OCOMP position.

The occurrence of pronoun retention is thus more common in the more marked positions like OP, GE and OCOMP. According to Keenan's (1972) principle of Conservation of Logical Structure (CLS), preserving features such as the pronoun in syntactic structures is necessary in order to keep the logical-semantic structure between the head noun and the relative clause. J. Hawkins (1994) classifies 'pronoun retention as a device that relieves the processing difficulty associated with complexity' (p. 45):

> The pronoun identifies the semantically appropriate position of the NP within the relative clause that is co-referential to the head, and so makes the relationship between the relative clause and head more semantically transparent (p. 44).

Since the pronoun facilitates the comprehension and production of relative clauses, it is not surprising that Hyltenstam (1984) found that all subjects, regardless of L1 background, used a pronoun strategy in the formation of relative clauses. He tested the use of resumptive pronouns in Swedish with the subjects whose L1s were Finnish, Spanish, Greek and Persian, using a controlled production test. He found that Finnish and Spanish speakers (whose L1s did not have the pronouns) used pronominal copies in the same way as Greek and Persian speakers (whose L1s did have pronouns), but Greek and Persian speakers produced more resumptive pronouns.

J. Hawkins (1994:44) points out that the implicational pattern of pronoun retention is the reverse of the NPAH in which 'if a language retains a pronoun on a high position, it retains it on all lower positions that the language permits relativization on'. This aspect was not predicted in Keenan and Comrie's NPAH proposal but it turns out to be an accurate observation. Pronoun retention is precisely correlated with the NPAH in that they are mirror images of each other. In the use of

the resumptive pronoun, Tarallo and Myhill (1983:71) suspected that 'learners have a greater need for the resumptive pronoun when the relativization site is farther from the head'. J. Hawkins (1994:45) provides an explanation on exactly that point: "Hence, the ultimate explanation for pronoun retention is a processing one, not a semantic one. It happens to be the case that semantic transparency facilitates processing ease on this occasion".

5.2.1.2 The markedness approach

Cross-linguistically, pronoun retention is unmarked (Keenan and Comrie, 1977), but pronoun deletion is marked in certain positions. Therefore, the NPAH can predict the retention or deletion of the pronoun from the position on the NPAH (Braidi, 1999:85). For example, in Korean, pronoun retention occurs only in GE, and GE is the lowest position on the NPAH. GE is thus the most marked relative clause structure in Korean.

Eckman (1977, 1985a) proposed the Markedness Differential Hypothesis for L2 acquisition in which he argued that areas of L2 acquisition difficulty could be predicted from a comparison between the learners' L1 and L2. The degree of difficulty is relevant and determined by considering whether the target language is different or more marked than the native language in any particular structure of the language. This hypothesis takes contrastive analysis a step further as it includes markedness relations when comparing differences in languages. Eckman found that 'the relative degree of markedness of the structures in question corresponds directly to the number of errors made' (Eckman et.al. 1988:11). The study also reports a significant finding for language teaching in that L2 learners could extrapolate from more marked structures to less marked structures in the acquisition of relative clauses. This is discussed in Chapter 6.

Avoidance of marked structure

The avoidance of marked structure has also been noted in the production of L2. Schachter's (1974) study found that Chinese and Japanese speakers made fewer errors than Spanish and Persian learners in the production of English relative clauses. She explained that the reason for this was that Chinese and Japanese tend to avoid using relative clauses in their English production, thereby producing fewer errors. Gass (1980) also reports that when she used a sentence-combining task to elicit

relative pronoun functions, learners avoided more marked structures, choosing to use SU or DO structures instead.

Discrepancy between the order of difficulty and the NPAH:

Although Keenan and Comrie did not advocate any relationship between the NPAH and the L2 acquisition of relative clauses, researchers to date has suggested that typological universals affect language processing, as certain structures are acquired in terms of markedness relationships on the NPAH (Gass, 1979; Hyltenstam, 1984; Pavesi, 1986; Eckman et.al., 1988; Doughty, 1991). However, the findings, concerning the order of difficulty in the acquisition of relative clauses presented by these studies are contradictory.

Gass (1979) and Doughty (1991) found that in the acquisition of relative clauses in English, GE was less problematic than DO and IO. This questioned the NPAH. Gass offers two possible explanations; one is the saliency of the genitive relative pronoun *whose*, which is the only pronoun coded for case/grammatical relation, and there are no variants such as *that* or *which* involved. Hence, it is the most salient of the English relative clause markers. The other possibility is that the genitive marker plus the following noun phrase might be treated as a complete unit such as *whose son:*

> The man *whose son* just came home .....
> (Gass 1979: 341)

Gass suggests that 'the areas of difficulty can be predicted on the basis of universal properties of RCs rather than on the basis of language specific properties' (p.339). Language specific factors can be added as an explanation where the discrepancies appear between the order of L2 acquisition and the NPAH as shown by the GE position.

Studies have shown that IO and OP positions are also reversed, with OP being more easily produced than IO (Gass 1979; Hyltenstam 1984; Pavesi 1986; Doughty, 1991).

5.2.1.3 Configurational approach

The configurational approach has been proposed as an alternative to Markedness theory in explaining the order of difficulties in relation to the NPAH (Tarallo and Myhill 1983; R. Hawkins, 1989). Tarallo and Myhill (1983) investigated the acquisition of relative clauses in Chinese, Japanese, Persian, German and Portuguese by English speakers. They were particularly interested in first language interference and the use of resumptive pronouns in the relative clause, deletion of relativizers, stranding of prepositions, deletion of prepositions, and piedpiping structures. They wanted to see whether the NPAH applied to these features. Since their subjects were learning two typologically different languages; left-branching languages (Chinese and Japanese) and right-branching languages (Portuguese and German), the research reveals interesting results.

Overall, the order of difficulty was in accordance with Keenan and Comrie's NPAH, showing that SU and DO were the easiest and GE the most difficult. The most important aspect of Tarallo and Myhill's (1983) findings, however, was that the acceptance of unacceptable resumptive pronouns was related to branching direction. They found that English speakers were better at judgements of SU in right-branching languages, and of DO in left-branching languages. They concluded that the proximity to the head from the deleted coreferential noun is the most important factor in the judgement of pronoun retention in relative clauses. In other words, in left-branching, head-final languages, the extracted DO position is closer to the head noun than the SU position, therefore DO is easier than SU. The result suggests that when English speakers learn right-branching languages, the order of difficulty is in accordance with the NPAH, but with left-branching languages the order may be different.

Another configurational explanation was proposed by R. Hawkins (1989). He investigated the acquisition of French relativizers by three groups of adult English-speaking learners, using a completion task, a GJ task and a combination task. The choice of the French relative pronouns *qui* and *que* is determined by whether the head is the subject or object of the relative clause and the pronoun cannot be deleted. The results showed that the order of acquisition of the relativizer generally followed the NPAH. However, in the more advanced group, DO was acquired before SU. R. Hawkins explains that the learners' difficulty in a particular relative clause has little to do with the relational notions of elements on the NPAH. But, 'the location of the

constituents of RRCs in surface structural configurations plays an important role in the way L2 learners construct rules' (p. 172, RRC: restrictive relative clause).

Along with Tarallo and Myhill, the view that language-specific factors are more important than the grammatical functions of the noun phrase is shared by other researchers (Wolfe Quintero, 1992; Hamilton, 1995). They suggest that configurational analyses, in which learners' ability to parse a linear ordering of grammatical elements, can explain the discrepancies between the NPAH and the order of difficulty in L2 acquisition. R. Hawkins concluded that 'difficulty of RRC type for L2 learners is a function of their processing capacity: their ability to parse L2 data' rather than theory of markedness (R. Hawkins, 1989:178).

On the issue of proximity, Ellis (1994:425) explains that in English the direct object function is more difficult than the subject function because the extract site (shown by ___) is further from the head NP (in italics) than is the case for the subject function. He suggests that the opposite holds true for left-branching languages. I show his English examples below and list the Korean version for comparison:

(5.1) DO
The *puppy* that I bought _____ was a nuisance.
nay-ka _____ sa-n *kangaci*-nun sengkasita.
I-NOM buy-REL puppy-TOP nuisance

(5.2) SU
I bought the *puppy* that _____ made me laugh.
_____ na-lul wut-key mantu-nun *kangaci*-lul sa-ass-ta.
I-ACC laugh-CAU make-REL puppy-ACC buy-PAST-END

(5.3) OP
The *house* that I lived in _____was very pretty.
nay-ka _____ sal-ten *cip*-un alumtawu-ess-ta.
I-NOM live-REL house-TOP beautiful-PAST-END

(5.4) IO
The *man* whom I spoke _____ with was American.
nay-ka _____ iyakiha-n *namca*-nun mikwuk salam-ita.
I-NOM speak-REL man-TOP American person is

(5.5) GE The *man* whose food I ate is a German.

?nay-ka ku-uy umsik-ul mek-un *namca*-nun tokilsalam-ita.

I-NOM he-of food-ACC eat-REL man-TOP German-is

Head initial/final parameter

L1 typological difference in the acquisition of L2 relative clauses was found to be significant in Flynn's (1989) study. She experimented with two groups of students – Spanish (a head-initial language) speakers and Japanese (a head-final language) speakers – by using an elicited imitation task on English restrictive relative clauses. She was interested in finding out whether the role of the L1 head-direction parameter affects performance in English. The result confirmed the hypotheses in that the two groups showed qualitatively different outcomes in their imitation tasks. Spanish speakers were significantly better at imitating the sentence types than Japanese speakers, which indicates that the same head-direction between the L1 and the L2 is a contributing factor for success. Flynn argues that

> L2 learners at early stages recognize a match or a mismatch in the values of the parameters between the L1 and the L2. When the L1 and L2 do not match, acquisition is disrupted, as learners must assign a new value to the parameter in acquisition (p. 104).

The nature of errors was also different. Spanish speakers made more lexical errors, whereas Japanese speakers produced more structural errors. In particular, they converted the clauses into coordinate sentence structures due to having difficulties with the head-complement configuration (p. 104).

5.2.1.4 Acquisition studies in Korean

Studies on the acquisition of relative clauses in Korean as an L2 by adult learners have been scarce. Yet studies on the acquisition of relative clauses in Korean as an L1 and L2 by children have produced some interesting results: for example, tests on children's spontaneous production (Y.J. Kim, 1987); comprehension (Clancy at.al., 1986); and performance on a listening comprehension test (A.I. Kim, 1988). In the following section we briefly review their studies, which may provide an insight into the acquisition of relative clauses by adult L2 learners.

Clancy et.al. (1986) experimented with 30 children aged between 6 and 7 to test their comprehension of relative clauses. Comprehension was measured by the children acting out with small toy animals what they heard. The findings of the study indicated that among the four variables tested; intonation, word order, (SOV or OSV), the function of the head noun in the main clause (subject or object) and the function of the head noun in the embedded clause (subject or object), word order was the most significant factor in the comprehension of the relative clauses. They report that the children understood the canonical SOV matrix order better than sentences in the alternative OSV order. In other words, the children responded much better to left-branching relative clauses than centre-embedded relative clauses. The study found that 'the status of the head noun as subject or object of the main clause had no significant effect by itself, the interaction between head noun status and matrix word order is very strong' (p. 236) and case marking was crucial in interpreting the grammatical function of the head noun.

When children processed sentences with a relative clause, there was strong evidence for multiple processing strategies which included: a basic left-to-right processing strategy; significant roles for a canonical sentence strategy (SOV word order); and a parallel function strategy i.e., relativization is easier where the head served the same function in the matrix sentence as in the relative clause, e.g. S-S, O-O (Sheldon, 1974).

The result partially contradicts the NPAH because children better understood some object relativizations (those in left-branching sentences) than certain subject relativizations (those in centre-embedded sentences). The study reports the importance of the use of case marking and inflections, and this indicates that the basic grammatical relations of sentence constituents was vital in children's strategies for processing both simple and complex sentences.

The relativizer was also seen to contribute to the superior comprehension of relative clauses by Korean children compared to Japanese children, which suggests that 'the special suffix on Korean embedded verbs also serves to contravene canonical or conjoined clause processing strategies' (Clancy et.al., 1986:260). The study emphasizes that multiple strategies must be taken into consideration to account for children's comprehension of the relative clause.

Children's processing strategies were examined from a different perspective in A.I. Kim's (1988) experimental study. The study was based on listening

comprehension tests taken by Korean bilingual children (10-15 years old) in both Korean and English. Kim reports that 'linguistic iconicity' was another powerful cognitive processing strategy used by children in the comprehension of the relative clause. According to A.I. Kim,

> The principle of linguistic iconicity can be broadly generalized to predict that linguistic structures that reflect a relatively high degree of iconicity (or motivation) are more facilitative to acquisition than those structures that do not (p. 201).

He argues that, for example, the acquisition of the relative clause type O-S is the easiest in English, which has the typology of SVO, right-branching, NVN (Noun-Verb-Noun). By the same token, he argued that it would be the hardest for the languages which have the opposite typology (SOV, NNV (Noun-Noun-Verb), left-branching) such as Korean. In contrast, the S-O type would be easiest in Korean and would be the hardest in English, thus showing a mirror-image of the results between the two typologically different language groups.

In the comprehension of relative clauses, A.I. Kim also noticed strong evidence for processing strategies in word order, branching direction and anti-interruption (Slobin, 1973). His view is that these strategies were employed due to linguistic iconicity. He suggests that iconically motivated (and thus less marked) structures should be taught earlier in the classroom. This suggestion is quite contrary to the research done on adult learners whereby if adult learners are taught more marked structures, they could learn less marked structures automatically (Eckman et.al., 1988; Doughty, 1991).

Y.J. Kim (1987) reports an insightful observation in her study of the acquisition of relative clauses by three Korean children using their spontaneous production as data. She found that two year-old children acquired the predicate adjectives (e.g., *i ker yepp-e.* 'This one is pretty.') before prenominal adjectives (e.g., *yeppu-n inhyeng* 'a pretty doll') and could produce utterances including prenominal adjectives and relative clauses at the same point in their language development. She explains that the morpho-syntactic similarities between the formation of the prenominal adjectives and the relative clauses by the nominal modifier and the relativizer were responsible for the early acquisition of the relative clauses. She reports:

> Once Korean speaking children begin to express complex ideas in attributive entity constructions, the length of the attributive expressions or the number of arguments in those expressions does not seem to be a factor determining the order of emergence of modifying expressions in spontaneous production, if the intended utterance is within the range of the learner's processing capabilities (p. 86).

In English, by contrast, children acquire relative clauses much later than the prenominal adjectives due to the complex syntactic movement in the construction of English relative clauses (Y.J. Kim, 1987).

Another interesting phenomenon found was that when Korean children started to use relative clauses, they only used the relative clause with dependent nouns: such as *kes* 'the thing', *tey* 'the place' and *ttay* 'the time' before the lexical head nouns. They produced these nouns mostly in the set form: *–(u)n kes* or *–nun kes*; *–(u)l ttay*; *-nun tey*. She suggests that this is most likely due to input from adults. The children were able to use the three relativizers *–(u)n*, *–nun*, and *–(u)l* five months after they began to produce relative clauses. As far as the pragmatic/communicative functions of the relative clause were concerned, Y.J. Kim found that 'both English and Korean speaking children began to produce the relative-clause-containing utterances to characterize/describe a physically proximate referent, which was often referred to by a deictic term such as *this*, *that*, or *here*'.

5.3 Acquisition of relative clauses in Korean as an L2

5.3.1 Methodology

5.3.1.1 Subjects

Two groups of subjects participated in the study: the first group comprised 22 undergraduate students who were majoring in Korean as an L2 in their second and third year courses in Australian universities. Most of them had only started learning Korean at university. The second group comprised 27 postgraduate students who were enrolled in various postgraduate courses in Korean as an L2 at the Seoul National University in Seoul, Korea. They had learnt Korean in their home countries during undergraduate courses before coming to Korea. In Australia, students from Monash University participated in a pilot study. Students from Curtin University of Technology, Griffith University and University of Sydney participated in the main

study.

The students came from seven language backgrounds: 14 Chinese, 14 English, 13 Japanese, 4 Russian, 1 Thai, 1 Vietnamese and 2 second-generation overseas Koreans (1 Chinese and 1 Russian backgrounds).

5.3.1.2 Instruments, Data Collection and Data Analysis

In order to validate the data, three different tasks were employed: sentence-combining, grammaticality judgment (GJ) and completion tasks (See Appendix I, II and III). These tests were used to measure learners' metalinguistic knowledge in the construction of relative clauses in Korean. The sentences in the three tasks included all five types of relative clauses possible in Korean: the relativization of Subject, Direct Object, Indirect Object, Object of Postposition and Genitive. The GJ task aimed to test the subjects' knowledge about the correct choice of the relativizer; the sentence completion task, to test the ability to form the relativized verb phrase; the combination task, to test the selection of relativizer, pronoun retention, and word order in the formation of relative clauses. This required more linguistic knowledge than the other two tasks. All sentences were limited to simple relative clause sentences i.e., [Rel + main] and in some cases a translation was provided under the word to ensure that vocabulary was not an obstacle in carrying out the tasks. Three native Korean university teaching staff carried out an item analysis of each sentence to ensure that the sentences were natural and appropriate for eliciting the intended data.

All tests were carried out in second semester 2001. Some students took the three tasks at the same time and some took the tests separately. No time limit was enforced for any tests.

Pilot study

A pilot study was carried out with eleven Monash University students in Australia to gauge the reliability and validity of the tests. The completion task and the GJ task elicited the required data, but there were problems with the combination task in eliciting the relativized sentences as intended. Students had been asked to combine two sentences into one by using an appropriate relativizer from a list of relativizers. Explicit instructions were given to indicate that the noun in bold letters in the first sentence was to be modified with the information in the second sentence and

respondents were provided with two examples. However, some students combined sentences by relativising the wrong noun, which meant that although the task was intended to elicit subject position, students relativized the object. For example, one task was to combine the following two sentences into one:

(5.6) a. **bus**-ka kocang na-ass-ta. b. Peter-ka **bus**-lul ta-ass-ta.
bus-NOM break down-PAST-END name-NOM bus-ACC ride-PAST-END
'Bus broke down.' 'Peter got on the bus.'

'Bus' is the head noun thus the correct, expected sentence was:

c. Peter-ka ta-n **bus**-ka kocang na-ass-ta.
name-NON ride-REL bus-NOM break down-PAST-END
'The bus which Peter got on broke down.'

Instead, some students produced sentences which they relativized the object as below:

→ d. Peter-ka kocangna-n **bus**-lul ta-ass-ta.
name-NOM break down-REL bus-ACC ride-PAST-END
'Peter got on the bus which broke down.'

Another kind of unsuitable response was where students used coordinative or conjunctive endings instead of the relativizer and produced sentences like the following:

(5.7) a. **Younghee**-nun nayil hankwuk-ulo tolaka-nta.
name-TOP tomorrow Korea-to go back-END
'Younghee goes back to Korea tomorrow.'

b. Younghee-uy apeci-ka tolaka-si-ess-ta.
name-of father-NOM passed away-HON-PAST-END
'Younghee's father passed away.'

→ c. **Younghee**-nun apeci-ka tolaka-si-ese nayil
name-TOP father-NOM passed away-HON-CON tomorrow

hankwuk-ulo tolaka-nta.
Korea-to go back-END
'Younghee goes back to Korea tomorrow because her father passed away.'

The expected sentence would be:

d. apeci-ka tolaka-si-n **Younghee**-nun nayil
father-NOM passed away-HON-REL name-TOP tomorrow

hankwuk-ulo tolaka-nta.
Korea-to go back-END
'Younghee whose father passed away goes back to Korea tomorrow.'

To eliminate these problems, the combination task was redesigned. Students were asked to fill in the underlined part with a relative clause, as in the following example. The head noun is specified in bold letters:

(5.8) a. **Bus**-ka kocang na-ass-ta.
Bus-NOM break down-PAST-END
'Bus broke down.'

b. Peter-ka bus-lul t'a-ss-ta.
name-NOM bus-ACC ride-PAST-END
'Peter got on the bus.'

→ _____ **Bus**-ka kocang nassta.

The following section describes each test in more detail.

The combination task

As described above, the combination task aimed to test the learners' productive knowledge, and, as such, was different from the GJ task and Completion task. Students were asked to combine twenty pairs of sentences into one by using an appropriate relativizer. Two examples were given at the beginning of the test. Explicit instructions required the subjects to use the listed relativizers so that they could not use other coordinative and conjunctive endings. The combination task had the particular focus on testing knowledge in the construction of relative clauses with regard to:

- relativizer
- resumptive pronoun
- word order.

The grammaticality judgement task

The GJ task aimed to elicit data about the learners' intuitive and receptive linguistic knowledge. In this task, students were asked to tick the box if they thought the underlined relativized verb phrase was correct and to mark 'x' in the box if they thought it was incorrect, and supply the correct form where underlined at the end of the sentence. For example, in (5.9), the underlined relative clause *tani-nun* was wrong because of the incorrect relativizer *–nun*, therefore, students needed to mark 'x' in the box, and then supply a correct relative clause e.g., *ta-nin*. This would ensure their judgement was not due to chance. Two examples were given as shown in (5.9). Of the 25 sentences, 14 had the correct relativised form and 11 did not.

(5.9) (Example)

☐x caknyen-ey ywulep-ul kachi yehayng tani-nun chinkwu-ka
last year-LOC Europ-ACC together travel-around-REL friend-NOM
hocwu-ey o-ass-ta. _____*ta-nin*_____
Australia-LOC come-PAST-END.
'The friend who I travelled around Europe with last year came to Australia.'

An error analysis was made of the sentences that the subjects judged incorrectly as either being grammatical or ungrammatical. The responses were scored as follows:

correctly marked as '√', or 'x' and providing the correct answer = a value of 1
wrongly marked as '√', or 'x' and providing a wrong answer = a value of 0
a value of 0.5 was allocated for responses such as the following:

1) correctly marked 'x', but the given answer was wrong.
2) correctly marked 'x' but did not give any answer.
3) marked 'x' for the correct answer but gave an alternative correct answer.
These were categorized as C/N.

GJ tasks have been criticized for being a sentence level tests and the fact that 'the input was controlled to a greater degree by the researcher' (Gass, 1979:333) and so it would be hard to measure the subjects' knowledge. However, as it has been pointed out 'in situations of spontaneous production L2 learners tend not to produce relative clauses' (R. Hawkins, 1989:166), hence the GJ task is still one of the most widely used forms of performance test for measuring learner's competence. In any case it is but one of three tasks used, for as Cook (1993:241) pointed out 'Even if one form of measurement is inadequate in itself, several forms of evidence showing the same point may cumulatively be more convincing', which is why the three different tasks were used in this study.

The completion task

In the completion task, students were asked fill in blanks in twenty sentences with an appropriate relativised form, by using the verb given and selecting an appropriate relativizer. The written instructions included two examples and explicitly asked students to use one of the listed relativizers; *–nun, –(u)n, –-(u)l, –ten, –ass,ess,yessten* in order to avoid students using other grammatical structures, such as conjunctive endings, *–a,e,yese* 'because' or 'and then', *–nuntey* 'and' or 'so', etc. For example, in the following question, students need to change the given verb *issta* 'to be' into *iss-nun* using the relativizer *–nun* and fill in the blank.

(5.10) unhayng twui-ey *(iss-nun)* kenmwul-i wucheykwuk-ita
bank back-LOC *issta* building- NOM post office-is
'The building which is behind the bank is the post office'.

Data Analysis

Error analysis was employed to identify the types of morphological and syntactic errors made by the subjects. Error analysis reveals what types of difficulties learners have in the formation of the relative clause using the relativizer and also shows the frequency of occurrence of those errors (Schachter, 1974:206-7). In each task, errors were categorized according to the type of relative clause: subject (SU), direct object (DO) indirect object (IO), object of postposition (OP) and genitive (GE). Subsequently the order of difficulty was determined and examined in relation to the NPAH and other research findings.

As discussed in Chapter 2, one of the most significant characteristics of the Korean relative clause is that the relativizer has the function of expressing the tense and aspect that are encoded in the verb. Because of this unique function, each sentence may have one correct answer, or there can be a number of grammatically correct answers in all three tasks, for example,

(5.11) ecey _____ hankwuk umsik-ul tto mek-ko sipta
yesterday *mekta* Korea food-ACC again eat-want
yesterday eat-REL Korea food-ACC again eat-want
'I want to eat the Korean food which we had yesterday again.'

In this sentence the correct relativized form can be either *mek-un* or *mek-essten* depending on the speaker's interpretation of the situation. This is due to the fact that the aspect is expressed from the speaker's point of view of whether the event is continuing, completed or not completed. All the possible correct relativizers were carefully examined by five native Korean speakers who were enrolled in English courses at Curtin University for the grammaticality and naturalness of the sentences with above 95% agreement about their judgments.

The variables considered in the three tests were:

- language background

- level of course; undergraduate or postgraduate
- types of relative clauses
- appropriateness of the relativizer
- error types in the GJ task and the combination task

Since the number of subject speaking certain languages was small (Overseas Korean 2, Russian 4, Thai 1 and Vietnamese 2), and the other three languages' subject numbers were comparable (Chinese 14, English, 14, and Japanese 13), the discussion will be mainly based on a comparison of the findings for Chinese, Japanese and English speakers. Below is a brief description of the relative clause systems in these three languages.

Chinese

Chinese has a head-final and left-branching relative construction with SVO matrix word order. The particle *de* is used in connecting the relative clause and the head noun, and also nouns and adjectives. All positions except the OCOMP can be relativized and the resumptive pronoun is only allowed in the GE position. The OP may never be moved or stranded but sometimes can be deleted.

Japanese

As discussed in earlier chapters, Japanese is very similar to Korean in the formation of the relative clause, with head-final and left-branching characteristics. However, it does not have any device that functions as a relative pronoun or relativizer, as the verb is left in dictionary form. Japanese is an SOV language with postpositional characteristics in which all postpositions are deleted when forming relative clauses. The OCOMP is not available in Japanese, and the possessive postposition may be left with a resumptive pronoun.

English

English is a head-initial and right-branching language, with relative pronouns. Relative pronouns are case marked lexicons, which are positioned immediately after the head noun and the relative clause must be adjacent to the head noun. The relative pronoun can be omitted if the noun phrase to be relativized is an object. All positions – SU, DO. IO, OP, GE and OCOMP – can be relativized, and pronoun retention is

not allowed in the relative clause.

The following is a brief sketch of characteristics of the relative clause in the subjects' L1s.

Table 5.1 Characteristics of the subjects' L1 relative clause

	Chinese	English	Japanese	Korean	Russian	Thai	Vietnamese
Position of RC to the head noun	left	right	left	left	right		
Relative marker	invariable	variable	not used	variable	variable	invariable	
Positions relativizable							
Subject	√	√	√	√	√	√	
Direct Object	√	√	√	√	√	√	
Indirect Object	√	√	√	√	√	√	
Object of Pre/Postposition	√	√	√	√			
Genitive	√	√	√	√			
Object of Comparative		√					
Pronoun Retention	IO,OP,GE	No	G	G		No	

5.3.2 Results and Discussion

5.3.2.1 The NPAH and order of difficulty

The overall results from the three tasks in the construction of relative clauses are presented in Table 5.2.

Table 5.2 Percentage of correct responses and ranking in production of relative clauses (All tasks)

Types of Relative Clause	Correct Response		Wrong Response	C/N Response
AH Hierarchy	%	Rank	%	%
SU	76.3	3	20.4	3.3
DO	76.2	4	22.2	1.6
IO	79.6	2	18.4	2.0
OP	82.2	1	11.5	6.3
GE	64.5	5	30.1	5.3
Total	75.7		20.6	3.7

The overall level of difficulty was determined by analyzing the results of the three tasks: The OP was the easiest and GE the most difficult in the acquisition of relative

clauses in Korean. IO appears as the second easiest, and SU (76.3%) and DO (76.2%) are also seen as relatively easy, both scoring just over 75% accuracy. However, when comparing the wrong responses, the rank of DO was lower than SU. This result clearly demonstrates that, with the exception of GE, there is no correspondence between the order of difficulty in the formation of relative clauses in Korean and the NPAH. As Tarallo and Myhill (1983:67) pointed out, it was never Keenan and Comrie's proposition that the NPAH could reflect the order of difficulty in L2 acquisition of relative clauses. It was Gass's (1979:339) suggestion that 'the AH presents an ordering of difficulty in L2 acquisition' which has made the predictive power of the NPAH one of the major research topics in the acquisition of L2 relative clause studies. The results for Korean in this study contradict Gass's claim. However, she recognized that language-specific factors needed to be considered in determining the order of difficulty and their relationship with the NPAH when rules of universal grammar are not working. In Tarallo and Myhill's study, the order of difficulty was found to be different between right-branching languages (Persian, German and Portuguese) and left-branching languages (Chinese and Japanese).

There have been very few studies done on Korean with which to compare the results of this study. A study on the acquisition of the relative clause in Korean as an L1 (Clancy et.al., 1986) reports that the NPAH's direct role in the L1 acquisition process was not supported.

As considered in 5.2, research thus far has suggested two explanations for the co-relationship between the NPAH and the order of difficulty in the acquisition of relative clauses. One explanation is markedness theory which argues that acquisition occurs according to the relational hierarchy of grammatical elements; that is, if the element is more marked, i.e. OCOMP and GE in this context, it will be harder to acquire (Doughty, 1991; Eckman et al. 1988; Gass, 1979, 1980; Hyltenstam, 1984; Pavesi, 1986). However, the order of difficulty suggested by these previous studies has been inconsistent. The results of this study show that markedness theory cannot explain the order of difficulty in the acquisition of the relative clause in Korean because OP and IO, which are more marked than SU and DO appeared as easier; only GE agrees with the order.

On the other hand, the configurational view (Tarallo and Myhill, 1983; R. Hawkins, 1989) argues that the ease and difficulty of the formation of the relative

clause is due to the proximity to the head noun to the extraction site in the embedded clause. According to R. Hawkins, the configurational account considers the learners' task as a *parsing problem* whereas in markedness theory, it is a *mapping problem.* (p. 174). In the following section, we examine whether configurational analysis can be applied to Korean, which is a non-configurational language. The underlining shows the place for the deleted coreferential noun, and the word in bold letters is the head noun. In order to illustrate the distance between the deleted site and the head noun, two sentences from the tests are provided.

Subject

(5.12) na-nun _____ kotung hakkyo-ey tani-nun **tongsayng**-i issta
I-TOP Ø high school-to go-REL brother-NOM have
'I have a brother who goes to high school.'

(5.13) nayil _____ Pusan-ey ka-l **chinkwu**-nun hocwu salam-ita
tomorrow Ø Pusan-to go-REL friend-TOP Australia person-is
'The friend who is going to Pusan tomorrow is an Australian.'

Direct Object

(5.14)

ecey _____ mek-ess-ten **pwulkoki**-ka acwu mas-i iss-ess-ta
yesterday Ø eat-PAST-REL BBQ-NOM very taste-NOM be-PAST-END
'The Korean BBQ which we had yesterday was very tasty.'

(5.15)

na-nun cinan cwu-ey _____ ilk-un **chayk**-ul tto ilk-ess-ta.
I-TOP last week-in Ø read-REL book-ACC again read-PAST-END
'I read the book which I read last week again.'

Indirect Object

(5.16)

nay-ka _____ pyenci-lul ponay-n **halmeni**-nun yengkwuk-ey sa-si-nta.
I-NOM Ø letter-ACC send-REL grand mother-TOP England-in live-HON-END
'My grandmother whom I sent a letter to lives in England.'

(5.17)

ecey nay-ka _____ cha-lul piliecwu-n **haksayng**-un Seoul-eyse o-ass-ta.

yesterday I-NOM Ø car-ACC lend-REL student-TOP Seoul-from come-PAST-END

'The student to whom I lent a car is from Seoul.'

Object of Postposition

(5.18) caknyen-ey _____ ilha-ten **Seoul siktang**-un sinay-ey issta.

last year-in Ø work-REL Seoul restaurant-TOP city-in is

'The Seoul restaurant which I worked last year is in the city.'

(5.19) yeki-ka 10 nyen cen nay-ka _____ tany-ess-ten **hakkyo**-ita.

here-NOM 10 years ago I-NOM Ø attend-PAST-REL school-is

'This is the school which I attended 10 years ago.'

Genitive

(5.20)

ku-uy apeci-ka uysa-i-si-n **James**-nun yaksa-ka toi-ess-ta

he-of father-NOM doctor-is-HON-REL name-TOP pharmacist-NOM become-PAST-END

'James whose father is a doctor became a pharmacist.'

(5.21)

tutie casin-uy kkum-i ilueci-n **Youngswu**-nun nemwuna kippu-ess-ta

at last oneself-of dream-NOM accomplish-REL name-TOP very please-PAST-END

'Youngswu whose dream was finally accomplished was really pleased.'

In the examples above, OP (5.18, 5.19) and DO (5.14, 5.15) are the closest to the head noun but their orders appear as the first and fourth respectively in the level of difficulty. SU (5.12, 5.13) and IO (5.16, 5.17) are both farther from the head noun than DO (5.14, 5.15) and OP (5.18, 5.19) but their level of difficulty is less than DO's. Even though SU (5.12, 5.13) and DO (5.14, 5.15) are not the same distance from the head noun, the overall results are identical. The GE, where the resumptive pronoun is left in the surface structure, is the only element which coincides with the

NPAH. Thus, the configurational explanation fails to provide convincing arguments for determining the order of difficulty in Korean. We need to examine why this is so. R. Hawkins (1989) explains the learners' task in light of the configurational account as follows:

> Their task, on encountering primary data, is to determine how three subcomponents of the surface structure configurations of RRCs interact: the head, the relativizer and the extraction site. 'Difficulty' arises for learners in assigning the appropriate interpretation to these three elements; and it would appear that *the difficulty of the task increases the less approximate the three elements are in the surface configuration.* Thus, on this view, difficulty of RRC types for L2 learners is not a grammatical problem at all, but essentially a parsing problem more properly associated with learners' ability to manipulate different constituents of a surface configuration. (p. 174, italic emphasis added.)

His observation that learners construct rules for relativizer morphology linearly, and that the learners' primary task is dealing with elements on the surface structure is correct. But if we follow his explanation further, we notice that his argument is limited to head-initial and right-branching languages.

> . . . learners construct rules for relativizer morphology that they do this *linearly*, **starting with the head**, and proceeding from the information provided by the head to information provided by the next most proximate NP, the embedded subject NP, and then to the NP beyond that, the embedded direct object NP (p. 176, bold emphasis added).

It is clear that the difference lies in the respective head-initial/final positions and branching directions. In head-final and left-branching languages like Korean and Japanese, learners do not start parsing with the head noun; they **encounter the relative clause first**. The information provided by the head, which is assumed to assist learners' correct formation of the relativizer is thus not available on-line when they make a choice of the relativizer. This is because language processing is left-to-right and incremental. In other words, learners have to supply the relativizer, which is in the form of a dependent morpheme at the end of the verb phrase, before meeting

the head noun. Then how can we explain the order of difficulty as exhibited?

At this point, we must acknowledge that the orders as determined by the three tasks individually are not identical (Table 5.3).

Table 5.3 Proportion of correct responses and order of difficulty according to task

Types of Relative Clause	Combination Task		Completion Task		GJ Task	
	% Correct	Rank	% Correct	Rank	% Correct	Rank
SU	62.8	4	93.4	1	73.9	3
DO	76.5	2	81.6	4	70.8	4
IO	70.4	3	82.1	3	84.9	1
OP	80.6	1	90.3	2	76.4	2
GE	57.7	5	68.9	5	66.5	5
Mean	69.6		83.3		74.5	

Since each task was intended to elicit different aspects of linguistic knowledge and demanded various levels of processing, the results obtained from the three tasks naturally show slight variations, except for the position of GE, which is consistent as the most difficult. Gass (1979:333) also noted variation in her study when employing the GJ task and the combination task, and found that the results were 'qualitatively different'. For this reason, it is necessary to discuss the results obtained from each specific task.

5.3.2.2 The combination task

Since the combination task requires the most linguistic knowledge, it is not surprising that the overall correct response rate was the lowest among three tasks, at about 70%. In this task, OP came out as the easiest position to relativize. In order to perform the combination task, the learners needed to go through the following steps:

1) delete the coreferential noun with the postposition in the second sentence except GE;
2) put the second sentence before the head noun;
3) change the verb in the second sentence to a relativized verb phrase using an appropriate relativizer.

For example, in the following OP relative clause task in (5.22):

1) delete (*Seoul siktang-eyse*) in the second sentence (5.22b);

2) put the second sentence in front of the head noun *Seoul siktang* in the first sentence (5.22a);
3) change the verb *illha-yess-ta* to *ilha-n* using the correct relativizer *–n* as below:

(5.22) a. **Seoul siktang**-un sinay-ey issta.
Seoul restaurant-TOP city-in is
'The Seoul restaurant is in the city.'

b. caknyen-ey (**Seoul siktang**-eyse) ilha-yess-ta.
last year-in Seoul restaurant-in work-PAST-END
'Last year I worked in the Seoul restaurant.'

→

Ad RC Head noun
c. [caknyen-ey ilha-n] **Seoul siktang**-un sinay-ey issta.
last year-in work-REL Seoul restaurant-TOP city-in is
'The Seoul restaurant where I worked last year is in the city.'

The coreferential noun in the second sentence ***Seoul siktang*** is marked by the case marker *–eyse* 'in' or 'at' which clearly specifies the function of the noun phrase in the sentence. There seemed to be no problem in the deletion of the postposition with the coreferential noun in the second sentence. Even though the preposition is never deleted in English, it appeared to be no trouble for English speakers. This is probably due to the fact that a particle is always attached to the words, which are thus treated as a unit.

The coreferential noun in the OP position invariably indicates a place with a locative particle *eyse* 'in' or 'at', or *ey* 'to' with the meaning of the relative clause usually denoting either 'doing something in/at **a certain place'**, or 'going to/attending/... **somewhere**' as below:

(5.23) **place**-eyse ilhayyo/kongpwuhayyo/mekeyo/...
-in/at work/study/eat...
'(someone) study/work/eat... in/at place

or

(5.24) **place**-ey kayo/tanieyo/oayo/. . .

-to go/attend/come . . .

'(someone) go/attend/come/. . . to place

For the next step, the learner needs to comprehend both sentences using the lexical and the grammatical information available to them. In Chapter 4, we have examined the processing of the relative clause. In the following section we briefly look at processing from a different angle.

To comprehend a sentence or a message, each L2 learner has to go through a processing procedure. The term processing is used for 'attending to and detecting linguistic data in the input' (VanPatten, 1996:17): whether this is heard or read. The Input Processing theory proposed by VanPatten is concerned with the question: How does an L2 learner deal with various items of incoming lexical and grammatical information? According to input processing, learners first attend to lexical items for semantic information and then proceed to form-meaning mapping by detecting grammatical form, which is encoded with meaning. In this process, the OP noun phrase is almost treated as an integral unit made up of the noun denoting 'place' and the locative particle *–ey* or *–eyse*:

tayhakyo-eyse 'at university'

cip-eyse 'at home'

or

hoisa-ey 'to work'

sinay-ey 'to the city'

We can infer that OP noun phrases were easy to comprehend because of the lexicon. The coreferential nouns in OP relative clauses invariably denote places, and activities in such places are highly predictable, frequently used, and represent a semantically simple notion to modify. For example, the noun 'library' is usually associated with 'study' and 'company' with 'work'. In psycholinguistics, the mental lexicon is considered the center of building linguistic competence rather than abstract syntactic rules (Little, 1994). The importance of lexicon in grammar and linguistic competence is described: 'learning a second language becomes a matter of establishing an L2 mental lexicon and "toolkit"' (Little, 1994:107); toolkit here means syntactic and lexical rules. The lexical information of the coreferential noun of the OP noun phrase

together with the location particle is a key-contributing factor in being able to process the combination task relatively successfully. Wasow describes this phenomenon in his postscript to Sells (1985) that "contemporary syntactic theories seem to be converging on the idea that sentence structure is generally predictable from word meaning" (1985:204 cited in Little, 1994:106).

In contrast, the learners seemed to have difficulties with SU position in the combination task. If we look at the case markers used with the coreferential nouns, however, they are straightforward and frequently used particles, as below:

Subject	-i/ka
Topic	-un/nun
Object	-ul/lul
Dative	-eykey/kkey
Locative	-eyse/ey
Possessive	-uy

The most important aspect of the formation of the relative clause in Korean is the fact that the relativizer is encoded in the verb phrase and expresses the tense and aspect. Therefore, how well the learner comprehends the verb phrase in the second sentence is vitally important for choosing the correct relativizer. In this regard, SU can take any verb type, whereas DO and IO take only transitive verbs. The verbs actually used in the SU relative clauses were intransitive verbs, a descriptive verb and an equative verb. This indicates the diverse semantic interpretations of SU relative clauses. The error types shown in the combination task in Table 5.4 indicate that the major source of errors was the relativizer.

Table 5.4 Types and proportion of errors in the combination task

Elements	Conj/ End	No answer	Rela- tivizer	Resum/ Pro	Word Order	Wrong Verb	Propor- tion of errors
SU	1	3	86	8	0	1	25
DO	2	2	74	17	2	2	16
IO	0	0	84	12	3	0	19
OP	0	0	84	16	0	0	13
GE	11	1	55	7	26	0	27
Propor- tion of errors	4	1	75	11	8	1	100%

Interestingly number of errors occurring with the resumptive noun in GE is lower than the other elements. This may be due to the fact that GE is the only position where the resumptive noun can be retained.

In GE position, the word order and conjunctive endings were troublesome. However, interesting results were revealed in the error types of UG and PG groups in the combination task (Table 5.5). The PG group performed significantly better in the relativizer and resumptive pronoun with an error occurrence rate of 33% and 25% compared to UG 67% and 76% respectively.

However, the errors in the word order and conjunctive endings are somewhat misleading; the PG made more errors here than the UG group (Table 5.5).

Table 5.5 Error types for the combination task in UG and PG learners

Elements	Relativizer		Resumptive pronoun		Word order		Conjunctive ending	
	PG	UG	PG	UG	PG	UG	PG	UG
SU	29	35	0	6	0	0	0	1
DO	13	22	1	7	1	0	1	0
IO	16	33	3	4	2	0	0	0
OP	5	27	2	4	0	0	0	0
GE	12	33	2	4	14	7	6	3
Total errors	75	150	8	25	17	7	7	4
	33.3%	66.7%	24.2%	75.8%	70.8%	29.2%	63.6%	36.4%

The PG learners tried to use conjunctive endings such as *–a,ese* 'since' or because' as in (5.25c); *-ca* 'as' 'when'; *-ki ttaymwuney*' 'because' instead of the relativizer.

(5.25) a. **Younghee**-nun hayngpokhata.
name-TOP be-happy
'Younghee-is happy.'

b. **Younghee**-uy somang-i ilueci-ess-ta.
name-of wish-NOM accomplish-PAST-END
'Younghee's wish has been accomplished.'

→

c. (ku-uy) somang-i ilueci-ese **Younghee**-nun hayngpokhata.
she-of wish-NOM accomplish-as name-TOP happy
'As Younghee's wish has been accomplished, she is happy.'

The expected combination was:

d. (ku-uy) somang-i ilueci-n **Younghee**-nun hayngpokhata.
she-of wish-NOM accomplish-REL name-TOP happy
'Younghee, whose wish has been accomplished, is happy.'

The genitive relative clause is not frequently used in Korean, as the sentence often sounds awkward and can be alternatively constructed using conjunctive endings such as (5.25c) as above. The results indicate that since the PG group was exposed to Korean longer than the UG group and had advantage of in-country living environment rather then foreign language environment at the time of the test, they had a higher level of proficiency to construct more natural sentences using conjunctive endings.

5.3.2.3 The grammaticality judgment task

The GJ task required receptive knowledge. The learners were best judging the IO, followed by the OP. This is in contradiction to NPAH theory as IO and OP being on the lower end of the NPAH should not be at the top end of correct judgments. L2 learners are also assumed to have difficulties with IOs because 'indirect objects are on the border between oblique and non-oblique, making it less clear what relativization strategy to use for them; prepositional objects, on the other hand may be assumed to be oblique' (Tarallo and Myhill, 1983:68). However, the Korean result in the GJ task proves that this is not the case, and we need to examine why this is so.

In the GJ task, all sentences were complete. Therefore the task essentially depended on the ease or difficulty of processing the sentence, including the relative clause. The ease of IO in the GJ task can thus be explained in the light of processing procedure (Pienemann, 1998). When the L2 learner processes the sentence, his/her task is to discover:

1) which forms are used to realize which functions in the L2, and
2) what weight to attach to the use of individual forms in the performance of specific functions.

If we look at the IO sentences in the test (see Appendix II), all the head nouns are animate and all the relative clauses are in the SOV canonical word order.

In English, grammatical relations are primarily determined by canonical word

order. For example, in English the first NP is the subject (agent), the second NP is the object (patient) etc. When L2 learners go through the form-function/meaning mapping procedure in order to comprehend the sentence or to get the message, the most reliable mechanism for them is word order. In other words, learners map conceptual structures directly onto linguistic form as shown below (Pienemann, 1998):

S	V	O
agent	action	patient
N	V	N
(Noun	Verb	Noun)

On the other hand, in non-configurational languages like Korean and Japanese, word order is flexible. Furthermore, Korean is a prodrop language in which the subject of the sentence is often omitted. Therefore grammatical relations cannot rely on word order alone. Instead, Korean utilizes morphological markings for case markers and inflectional endings which determine the grammatical functions of each constituent in the sentence. In particular, most case markers have morphemes with a one-to-one form-function relationship except the topic marker *–un/nun* which is also used for the relativizer.

Pienemann (1998) correctly assumes that, in non-configurational languages, grammatical roles can be specified directly from the semantic roles specified in the conceptual structure. In other words, unlike configurational languages such as English in which the grammatical roles are primarily determined by the word order (SVO) or mapped onto the conceptual structure (agent-action-theme), Korean relies heavily on case particles and inflectional endings for conceptual structure. In order to grasp the meaning of an utterance, learners must determine each noun's semantic and grammatical roles (VanPatten, 1996:33). In the case of Korean, case particles perform a crucial function in specifying the case of each word in the sentence denoting 'who did what to whom'. When processing the sentence involving IO relative clauses, all the necessary semantic and grammatical information is available on-line in the canonical word order S-O-V, which is clearly marked by case-particles as below. This enables the learner to process the elements and to get the meaning of the sentence.

S-i/ka	**O-ul/lul**	**V**
agent	object	action
N	N	V

On top of canonical word order, there is a 'pragmatic' word order, which also helps processing, by the saliency of the word in initial and final positions (Pienemann, 1998). A typical example would be the temporal adverbial at the beginning of the sentence in both configurational and non-configurational languages. This is particularly significant in the correct judgment of relative clauses in Korean because the relativizer is encoded with time and aspect. Hence, the adverb helps the learner to set the correct time frame for the judgment of the relativizer. The following is the prototypical conceptual structure of an IO relative clause:

Adverb	**S**	**IO**	**DO**	**V**	**Head Noun**
	Someone to **someone** something *give/send/lend* . . .				
	agent	*patient*	*goal*	*action*	
	____i/ka	(_Ø_eykey)	____ul/lul	_____(u)n/nun/(u)l/ten .. .	
PP/Wh	NP	NP	NP	RC	

(PP: Postposition; Wh: Wh words; NP: Noun phrase; RC: relative clause)

Now, consider the following example in the GJ task:

(5.26)

Adverb	**S**	**IO**	**O**	**V**	**Head Noun**	
ecey	nay-ka	_____	cha-lul	pilieycwu-n	**haksayng**-un	Seoul-eyse
yesterday	I-SUB		car-ACC	lend-REL	student-TOP	Seoul-from

o-ass-ta.

come-PAST-END

'The student to whom I lent my car yesterday came from Seoul.'

In (5.26), we can see that all the 'meaningful elements' are presented in the complete SOV canonical order specified by case particles; *-ka* for subject and *–lul* for object.

The time adverbial *ecey* 'yesterday' is at the beginning of the sentence denoting the time, which makes it easier for the learner to process and judge the relative clause.

In regard to the syntactic structure of IO, J. Hawkins explains that

> The minimal SD of a DO is properly included in that of an IO, since a clause with an IO generally requires an accompanying DO and also a SU, whereas a DO can occur with and without an IO (1994:39, SD: structural domain).

This also applies to Korean. Except in the case of Korean, SU and DO can be omitted, depending on the context. However, it is evident that the learners' parsing task is easier when the syntactic structure retained the necessary 'meaningful elements'; subject, object and verb in the canonical word order. Processing ease was the main contributing factor for the IO being the least difficult in the GJ task. As R. Hawkins (1989:174) pointed out, the task of the L2 learner in the judgment of grammaticality is essentially a parsing problem. However, the configurational approach is only partially correct for head-final, left-branching languages like Korean. Although the extracted site of the IO is further from the head noun than DO, yet IO is the easiest task in the GJ test.

R. Hawkins also suggests that in French 'learners appear first to construct rules for RRC on the basis of adjacent categories in surface configurations' (RRC: restricted relative clause, p. 177). However, this is not the case in the formation of the relativizer in Korean. In order to construct relative clauses using the correct relativizer, learners have to interpret the whole clause including the time adverbial, which is usually stated at the beginning of the sentence and is farther from the head noun.

5.3.2.4 The completion task

In the completion task, the main focus was to test the learners' ability to form the relative clause using the correct relativizer and supply it in the blank in the fully constructed sentence. In comparison with the combination task and the GJ task, the learners performed the best at this task, scoring a correct response rate of 83%. The highest and lowest positions of difficulty were SU and GEN, and is identical to the NPAH hierarchy.

We should note that this type of cloze task has been criticized for its 'artificiality' in eliciting the data. The argument has been that the task favours producing results in support of a surface configurational explanation (R. Hawkins, 1989:166). However, the results of this study demonstrate otherwise.

Below Table 5.6 shows the error types in the completion task.

Table 5.6 Types and proportion of errors in the completion task

Elements Label	Conj/End	No answer	Rela-tivizer	Wrong Verb	% of Total error
SU	0	8	92	0	8
DO	0	0	100	0	22
IO	3	6	86	6	21
OP	0	0	100	0	12
GE	18	10	72	0	37
% of Total error	7	5	86	1	100%

Processing may be less problematic in DO and OP positions in the completion task, as all errors occurred with the relativizer. IO and DO scored similar results but in IO, the errors were included using conjunctive endings and wrong verbs, and some subjects avoided answering altogether. The result also indicates that in GE, some learners used coordinative or conjunctive endings. As explained previously, this could be also due to the proficiency of the PG learners, as they prefer using more natural conjunctive endings rather than the relativizers.

It is important to note that the result is very much dependent on the research instrument, as each task places different cognitive demands on the subjects (Clancy et.al., 1986:250). Making a comparison between the results without considering the individual test types might give rise to dangerous generalizations. For instance in the GJ task, the emphasis was more on the learners' receptive skills, since all sentences were fully constructed. In the completion test, however, the learners need more than receptive skills, as they have to supply relativized verb phrases using the correct relativizer. Finally the combination task requires more overall linguistic knowledge.

5.3.2.5 The order of difficulty according to language level

The UG and PG levels show the same tendency as the overall order, with OP as the highest and GE the lowest (Table 5.7). Interestingly the order of the PG level was

identical to the overall order. PG scored an average 20% higher than UG in all positions showing their competence in all tasks.

The order of difficulty shows a slight variation between the two groups as it did in R. Hawkins's (1989:168) study between the A level group and an undergraduate group.

Table 5.7 Correct use and order of difficulty according to language level (All tasks)

All Tasks	PG		UG	
Elements Label	% correct	Rank	% correct	Rank
SU	84.9	3	64.1	4
DO	81.8	4	69.7	2
IO	89.5	2	67.5	3
OP	91.4	1	71.8	1
GE	74.6	5	52.1	5
Mean	84.4		65.0	

5.3.2.6 The order of difficulty and language backgrounds

There was some variation in the order according to the L1 but strong consistency was shown in the highest and the lowest positions across languages: GE was the most difficult across all L1s and OP was the easiest. Some variation occurred in IO, DO and OP positions (Table 5.8).

Table 5.8 Proportion of correct responses and order of difficulty according to language background (All tasks)

Types of Relative Clause	Chinese		English		Japanese	
	Correct %	Rank	Correct %	Rank	Correct %	Rank
SU	78.4	3	62.4	4	80.5	4
DO	73.7	4	66.1	1	82.6	3
IO	82.4	2	65.9	3	85.8	2
OP	86.5	1	66.1	1	87.0	1
GE	73.6	5	54.4	5	62.7	5
	78.9		63.0		79.6	

The English speakers' results reveal interesting points; DO (66.1%) and OP (66.1%) scored exactly the same, as the easiest and even IO (65.9%) was very close to DO and OP indicating that Object positions were easier than subject. This is a similar

result to Tarallo and Myhill's (1983) study. They found that when English speakers were judging the grammaticality of resumptive pronouns in Chinese and Japanese, DO was easier than SU. Tarallo and Myhill explained this result by saying that the relativized DO position is closer to the head than is the SU position. However, as explained in 5.3.2.1, the Korean results show that the configurational approach is not as relevant to Korean as it is to English.

Chinese and Japanese, both left-branching languages, show the same orderings in OP, IO and GE. Only SU and DO positions were reversed. In Chinese, the position of the object is after the verb, whereas Japanese being an SOV language is the same as Korean. However, whether L1 word order had any bearings on the result is beyond the scope of this study. In the completion and combination tasks, English speakers made errors mainly in the relativizer and resumptive pronoun (Table 5.9).

Table 5.9 Language background and error type

(In completion & combination tasks only)

Error type	Conj/ End	No answer	Rela- tivizer	Resum/ Pro	Word Order	Wrong Verb	% of Total errors
Chinese	0.9	0.0	93.6	1.8	3.6	0.0	23.8
English	1.4	1.4	81.7	12.0	2.4	1.0	44.9
Japanese	10.9	9.9	63.4	4.0	11.9	0.0	21.8
Korean	42.9	0.0	42.9	0.0	14.3	0.0	1.5
Russian	16.1	0.0	71.0	0.0	12.9	0.0	6.7
Thai	0.0	0.0	100.0	0.0	0.0	0.0	0.6
Vietnamese	0.0	0.0	33.3	66.7	0.0	0.0	0.6
% of Total errors	5.0	2.8	79.0	7.1	5.6	0.4	100%

Interestingly, although English normally does not allow the resumptive pronoun, the English speakers produced notably more than other languages. For example, in (5.27), the coreferential noun with the postposition *tosekwan-eyse* was not deleted.

(5.27) a. tosekwan-un say kenmwul-ita.
library-TOP new building-is.
'The library is a new building.'

b. mayil tosekwan-eyse swukcey-lul hanta.
everyday library-in homework-ACC do
'Everyday (I) do my homework in the library.'

→ c. *mayil **tosekwan-eyse** swukcey-lul ha-nun tosekwan-un say kenmwul-ita.
everyday library-in homework-ACC do-REL library-TOP new buildings-is
for 'The library where I do my homework everyday is a new building.'

A similar phenomenon was also noted in Tarallo and Myhill's (1983) study where English speakers accepted unacceptable resumptive pronouns significantly more often in left-branching languages (Chinese and Japanese) than in right-branching languages.

It is difficult to determine whether or not the presence of L1's relativizer/relative pronoun has any effect on the acquisition of the relativizer in Korean. For instance, the main source of errors for Chinese speakers was predominantly in the relativizer, which accounted for 94% of the total errors they made. Chinese utilizes the invariant relativizer *de*. Japanese speakers, whose language has no relativizer, made 63% of their total errors in the relativizer, much less than Chinese and English speakers. Surprisingly 10% of the subjects did not attempt to answer. It is not certain whether the absence of the relativizer in Japanese or the learners' lack of confidence in using the relativizer because of unfamiliarity resulted in low attempts and avoidance. English, which has variant relative pronouns, made 82% of their total errors in the relativizer. However, when comparing the errors made in the relativizer according to L1s (Table 5.10), English speakers made the most errors followed by Chinese and Japanese. There is however no clear indication of any transfer from L1.

Table 5.10 Number and proportion of errors in the relativizer according to L1

	Combination Task		Completion Task	
Language background	Number of errors	%	Number of errors	%
Chinese	66	30	37	26
English	96	43	73	52
Japanese	39	17	25	18
Others	22	10	6	4
Total	223	100	141	100

When Gass (1979:337) attempted to determine L1 transfer in the variability of the RC marker among languages, she suggested that no significant differences were noted between the two groups: speakers of languages with a variable marker and speakers of languages with an invariable marker. She suggested 'marker variability is not a relevant factor in the prediction of difficulty in adult L2 acquisition'. Tarallo and Myhill (1983) were also unsure whether overt marking of the relativizer, regardless of L1, made parsing any easier. This study also reports that the presence and variability of the relativizer has no relevance in the acquisition of the relativizer.

The errors made in the relativizer are difficult to categorize according to tense/aspect categories, This is due to the fact that the interpretation of the tense and aspect is up to the speaker's point of view; hence multiple correct answers are possible. It has been argued though, when aspect is an inflectional category as are the relativizers in Korean, 'inflectional aspect serves to indicate how the action or state described by the verb should be viewed in the context of discourse' (Hopper, 1977 cited in Bybee, 1985:21). Hopper argued that if the text is at the level of discourse, background information is usually expressed by an imperfective verb form, and the foreground information of the main story is expressed as a perfective verb form. Since this test was in context-less single sentence format, the subjects could make different interpretations of each situation.

As explained earlier in this chapter, the learner's choice of the correct relativizer in Korean is not dependent on the head noun. In the acquisition of relativizers in French (L2), R. Hawkins (1989) found that the learners' strategy in the early stage of development in selecting the correct relativizer was based on information provided by the immediately left-adjacent category, the head. The learners constructed rules on the basis of animacy. Similarly, in English, the head noun is a determinant for the choice of the relative pronoun. For example, the relative pronoun will be selected depending on the animacy of the head noun and the case of the head noun: i.e., if head is [–animate] as in (5.29) and (5.30), select which or that; if head is [+animate] as in (5.28), select who, whom or whose. The choice then depends on the case of the replaced noun in relative clause.

(5.28) I met the man *who/whose/whom*

(5.29) I drank wine *which/that*

(5.30) I went to the market *which/that*

In Korean, in order to select the correct tense and aspect for the relativizer, learners have to process the whole clause before the head noun. Hence, the head noun is not directly related to the formation of the relativizer in Korean. On the development of the head noun in children's acquisition of the relative clause, Y.J. Kim reports that:

> Korean-speaking children, at the beginning of relative clause production, use only *kes* as a head noun; only several months later do lexically determinate head nouns emerge (1987:88).

The dependent noun *kes* means 'the thing' or 'the one' and always needs to be used with a modifier, commonly with deictic modifiers such as *i* 'this'; *ku* 'it' and *ce* 'that'. The children produced relative clauses like:

(5.31) *pay ta-nun ke salam i-ya?
boat ride-REL thing person
'Is (this) the one the person who is riding a boat?' (p. 89)

She proposes that this phenomenon is due to adults' input. However, it brings out two important points in regard to the role of the head noun in the formation of the relative clause in Korean.

1) The relative clause is formed before the head noun and the relativizer is encoded in the verb phrase. Therefore, the effect of the head noun is insignificant for the choice of the relativizer. In other words, when processing a sentence, including a relative clause, on-line, the hearer is unaware of the head noun until after the relative clause ends.
2) The main function of the relative clause is 'identification' and 'characterization'. In Korean, identification comes before the head noun. For example, in (5.32), the head noun is irrelevant to the choice of the relativizer; *–nun*, *–ten* *–(u)l* or *–(u)n*. The correct choice of relativizer is based on information about the tense and aspect of the relative clause, which is often provided by a temporal adverb, such as *yocum* 'these days' in (5.32). Learners' ability to process the relative clause and to interpret the temporal situation is the major factor for the correct selection of the

relativizer. In (5.32), the correct relativizer is *–nun*, irrespective of the head noun. This illustrates my point.

(5.32) yocum [Peter-ka cohaha **-nun]** kes/umak/potocwu/salam
-ten
-n
-l
these days name-NOM like- REL thing/music/wine/person
'These days [the thing/music/wine **which** Peter likes
*used to like
*liked
*would like

Therefore, the animacy of the head noun has no relevance in the choice of the relativizer in Korean.

5.3.2.7 Learner strategy

From the characteristics of the relative clause in Korean and the results shown by the learners' performance, we can detect those learners' strategies which were successfully used in this study. Since each task demanded a different level of linguistic knowledge and different processing requirements, the learners used a variety of strategies to perform the tasks. Comprehension is fundamental for carrying out the tests: comprehension is regarded as an hard work for learners as they process sentences left-to-right by attending and using grammatical and lexical resources available on-line (VanPatten, 1996).

It was evident that in the GJ task, comprehension seemed to be easier for the learners when all the necessary meaningful elements, i.e., subject, direct object, indirect object and verb, were present in the surface structure, with case markers attached. The case markers played a crucial role by specifying the role of each element, so that the parser could process the semantic and grammatical information. The subject and object of the sentence are often omitted in Korean, but the results showed that the learners performed best when all the elements of the relative clause were available on-line and in the canonical word order, as in 'S-ka O-lul V', the relative clause denoting 'who did what to whom'.

On the other hand, we have noticed that, in the production of a combination task, the lexical meaning itself made the task easy. This was particularly apparent with the lexical meaning of the OP noun phrase, which invariably denoted 'place' and which contributed to successful relative clause construction. Although the notion of a mental lexicon is at a very early stage of development in L2 acquisition, it has been a central focus of L1 language acquisition. Little explains that

> The lexicon inevitably plays a central role in research into communication and learning strategies that depend on word coinage, borrowings, idioms and prefabricated patterns and the like . . ." (1994:107)

Since the relativizer is encoded with the tense and aspect, the presence of a temporal adverbial was the significant factor in determining the correct tense assignment in the relativizer. The adverb is usually stated at the beginning of the sentence, thus the saliency of the adverbial in its initial position and its primacy as a lexical item helped the processing.

5.4 Limitations of the study

There were a number of factors which limited the scope of this study. Although this study employed three different tasks in order to elicit comparable data, there is a chance that the results may not be consistent since this is a cross-sectional study in which the tests were carried out at one time, without replication at a later date to observe and measure change.

The study involved two groups of subjects at different levels: UG and PG. However, this study did not attempt to investigate the developmental aspect of acquisition. An interval between two tests with the same group would be able to provide information about learners' development in the acquisition of the relative clause.

It was difficult to determine the order of difficulty among the relativizers. Since the tests were sentence level tests, the subjects could interpret each sentence differently, depending on their view of the situation. The very characteristics of the relativizer in Korean allow multiple interpretations of the tense and aspect. Consequently there could be a number of correct responses. In future studies, a

discourse-based text such as a story or a piece of conversation might be used so that the time line is coherent and the correct response can be more naturally regulated.

This study was unable to detect errors in the adjacency and branching direction in the construction of the relative clause. As discussed earlier, this was due to the problems noticed in the pilot study. The resultant modifications limited the type of combinations the students could construct. A piece of free composition might be better at detecting these problems. However, we leave this for future research.

In this study, the combination of the grammatical role of the relative clause with the matrix sentence i.e., SU/DO or DO/IO was not determined, since the focus of the study is on the formation of relative clauses.

There is of course a fundamental question of how we measure acquisition of a particular grammatical structure; a quantitative distributional analysis, which I presented in this chapter, is a first step to find out acquisition process of the relative clause. Further research is needed to convert 'quantitative' data into qualitative data using acquisition criterion (Pienmann, 1998).

5.5 Summary

The results presented in this chapter pose a number of challenges to earlier studies in the L2 acquisition of relative clauses. The order of difficulty determined by three tasks – combination, completion and GJ task – shows that there is little association with either the NPAH or markedness theory. Depending on the task, the learners showed slight variance in the order of difficulty, as each task demanded different types of linguistic knowledge and types of processing.

Although the configurational approach was useful in examining the difficulty of particular relative clause types, it failed to explain the order of difficulties exhibited in this study. The main reason for this is that the configurational account does not take account of the characteristics of the head-final and left-branching relative clause in determining the order of difficulty.

One of the most important features, and one which configurational analysis fails to include, is the fact that learners of Korean encounter the relative clause before the head noun. Therefore, processing strategies involved in the correct choice of relativizer are markedly different from those for head-initial and right-branching languages. For instance, Korean requires the comprehension of the whole relative clause, including the temporal adverb, in order to make the correct choice of the

relativizer. Hence, the head noun has little effect on the choice of the relativizer. On the other hand, in right-branching languages, the head noun determines, for example, the correct choice of the relative pronouns in English, and the relativizer in French. What is clear from these results is that all learners, no matter what their language backgrounds, process semantic and grammatical information from left-to-right in incremental order.

The processability (Pienemann, 1998) of configurational elements on the surface structure is crucial for learners in performing the tasks. As R. Hawkins (1989:175) has suggested, the learners' ability to parse L2 data and to be able to 'manipulate different constituents of a surface configuration' is important for the judgement and formation of relative clauses in Korean.

The results of the combination task and completion task indicate that PG learners of Korean, who were exposed to Korean longer and had more contacts with the native speakers in country (Korean as a second language), preferred using conjunctive endings rather than genitive relative clauses.

The learners employed various strategies to perform the tasks: in the combination task, OP was shown as the easiest and this seemed to be due to the lexicon of the OP noun phrase which projects semantic simplicity. In the GJ task, the learners' judgment was the best in IO, which indicates that processing is easier when the necessary meaningful elements are all presented with case particles in SOV canonical word order.

Chapter 6. Effective instruction and pedagogical grammar

6.1 Introduction

This chapter explores aspects of teaching relative clauses in Korean in the context of the discussions in and findings of this study.

My survey on L2 Korean language textbooks and grammar books currently used in Korea and Australia (see appendix IV) shows that most books do not introduce the relative clause, *kwankeycel* as a grammatical item. The relativizer is simply introduced as the nominal modifier ending along with the nominal modifier *–(u)n* for the attributive adjective. The common explanation is that the nominal modifier *–(u)n* is used for the descriptive verb and *–nun, –(u)n –(u)l* and *–ten* are used for the processive verb. There are no clear semantic explanations about the modifying ending *–(u)n* and its two different functions; one which is used for the attributive adjective and the other for the relativizer.

Since there are no grammatical or functional explanations about the relative clause in the textbooks, learners of Korean may not be aware of the existence of the relative clause and its characteristics while they are learning Korean. However, learners commonly try to translate Korean relative clauses into English in order to understand them. Consequently, learners encounter a very important universal feature of the language without adequate explanation. Is this an effective way of teaching/learning Korean (L2) grammar? Korean is mostly taught at a university level where learners are of similar age and have similar motivations and academic backgrounds. The learning is formal (Krashen, 1976) and the acquisitional setting is classroom second language acquisition (SLA) (Ellis, 1985:215). There are time constraints too. This chapter evaluates 'Instructed language teaching' and pedagogical grammar for effective language teaching for such students, with particular reference to the relative clause in Korean.

From the early 1980s, communicative language teaching/learning has been the focus of L2 language acquisition studies. Structuralist and behaviourist theories accompanied by audio-lingual methodology in the 1960s and 1970s have been replaced by a strong emphasis on 'communicative competence' (Hymes, 1979) in language acquisition. The theories behind this trend include 'creative construction' (Dulay and Burt, 1977), a 'functional approach' (Halliday, 1979), 'language to use' (Brumfit, 1979; Johnson, 1979) 'acquisition vs. learning' (Krashen, 1982a) and a

'natural approach' (Krashen and Terrell, 1983). As language teaching/learning embraced the theories of natural communication and subconscious acquisition opposed to formal instruction and conscious learning, grammar was treated as insignificant; as if teaching grammar was old-fashioned, outdated and might even a hindrance to language acquisition.

In his 'comprehensible input' theory, Krashen (1985:2) argues that "If input is understood, and there is enough of it, the necessary grammar is automatically provided". Generally speaking this summarizes how grammar has been treated in language teaching practices in the post-structuralism period. However, Odlin (1994:315) has pointed out that L2 acquisition is fundamentally different from L1 acquisition, hence 'instruction can make a difference' to L2 acquisition. The effect of instruction in L2 acquisition has been re-evaluated since the 1980s as more studies have reported the benefit of grammar teaching and formal instruction. This will be discussed in 6.2.

In order to have competence in Korean, the acquisition of the relative clause is imperative, as the functions of the relative clause are essential for effective communication. This chapter aims to elucidate an effective way of teaching the relative clause in Korean in which two aspects of language teaching are considered: The first part of the chapter presents an overview of the effectiveness of instruction in L2 acquisition with a brief review of empirical research in the acquisition of relative clauses. The second part examines the content and process of pedagogical grammar and evaluates its merits. Finally, some suggestions are made for the teaching of relative clauses in Korean.

6.2 Instructed language teaching

6.2.1 Overview of research on Instructed Language Teaching

Many studies have been done on Instructed Language Teaching: Larsen-Freeman and Long (1991) reviewed eleven studies on the relationship between instruction and L2 acquisition. These studies focussed on: 1) accuracy orders/developmental sequences; 2) acquisition processes; 3) rate of acquisition and 4) the level of ultimate SL attainment. Ellis (1994) also provided an extensive review of forty-six studies on the effect of instruction in four different areas; 1) general language proficiency; 2) production accuracy; 3) sequence of acquisition and 4) the durability of formal

instruction. This section briefly examines the significance of instructed language teaching in L2 acquisition, using these two comprehensive reviews as a basis.

In a broad sense, formal instruction refers to grammar teaching and classroom teaching (Ellis, 1994). As L2 language-teaching practices have been influenced by natural acquisition theory and the communicative approach, researchers have asked "Is L2 acquisition possible through formal instruction?" The general consensus from research to date suggests that a form-focus instruction cannot alter the natural sequence of acquisition of developmental structures. It is also doubtful that instruction can improve accuracy orders; i.e. 'formal instruction does not change the order in which morphemes are supplied accurately' (Larsen-Freeman and Long, 1991:304). However, it has been evident from research that instruction has a positive effect on the rate of acquisition; learners can accelerate their progress. For example, teaching the more marked features enables the learner to learn unmarked features automatically (details in 6.2.2). Form-focused instruction is particularly effective with adult learners, as they are more inclined to reason about linguistic phenomena and to appreciate logical explanations. This is succinctly summarized by Larsen-Freeman and Long:

> ... while comprehensible input may be necessary and sufficient for SLA, instruction may simplify the learning task, alter the processes and sequences of acquisition, speed up the rate of acquisition and improve the quality and levels of SL ultimate attainment. (1991:304)

6.2.2 Effect of instruction on the acquisition of relative clauses

A number of empirical studies on the acquisition of the relative clause report that the effect of instruction is positive: Gass (1982) tested the effectiveness of instruction in the acquisition of relative clauses at the University of Michigan. She divided the ESL students into two groups. One group received instruction on the Object of a Preposition clause which is the fourth lowest on the NPAH, and therefore assumed to be difficult to learn. The second group, the control group, was taught the 'easier' clauses (SU, DO). Both groups were at the same beginner level and received the same amount of instruction for three days. The grammaticality judgment (GJ) task and a sentence-combination task were used for pre-tests and post-tests. The study found that the experimental group achieved a significant improvement in all relative

clauses, no matter their position on the hierarchy, including those for which they had not received any instruction. (Larsen-Freeman and Long, 1991:315)

A comparative study by Pavesi (1984) also reports the benefit of instruction. The study was conducted with two groups of Italians learning English. One group was of forty-eight Italian high-school students who had received grammar-based instruction at school from two to seven years. The other group comprised thirty-eight Italian workers who had learnt English in a naturalistic setting without any formal instruction, at home or work places such as restaurants. The test was designed to elicit relativization of all NPs on the NPAH by asking them to describe the identity of characters in a set of pictures. The result showed that the way the subjects acquired English did not alter the developmental sequence. However, some interesting differences were noted between the two groups. The instructed group were able to use the more marked relativization on the NPAH and they produced significantly more resumptive pronouns than the naturalistic group, whereas more frequent noun retention was found in the naturalistic group than in the instructed group.

Eckman replicated a similar study. When instruction was given to three groups on Subject position, Object position and Object of Preposition respectively, the group with OP instruction performed the best, followed by those who had been taught Object position (Eckman et.al. 1988:11). The result implies that, contrary to general belief, learners taught the most difficult structure on the implicational scale first, would acquire the easier structures automatically.

Doughty's (1991) study also shows a similar result on the acquisition of different types of relative clauses. She experimented with the effect of instruction on three groups on text comprehension. The task consisted of a reading text, which contained several examples of relative clauses, with the target noun phrase structures. Students were asked to read the text as it appeared on a monitor screen. The result revealed that the two experimental groups performed better than the control group who received no instruction. One of the experimental groups, which had comprehension–based instruction and 'Dictionary Help' provided by an instructional window on the screen, performed significantly better than the other group, which received explicit grammar instruction about relative clauses. She found that "... instruction incorporating marked data potentially generalizes not only to that marked data but to other contexts as well" (p. 464). This Implicational Generalizability hypothesis

(Hamilton, 1994) has significant implications in teaching the relative clause, as it suggests that the order of presentation of noun phrases does not have to be in accordance with common teaching practice, where the 'easier' construction is taught first.

6.2.3 Effective language instruction

Focus on form

It is evident from past research that instruction is effective when learners have had complex language input and focus on form. However, 'Focus on form' has been a contentious issue among L2 researchers and practitioners because of its confusing interpretations. Long (1991) distinguishes his 'focus on form' from the traditional focus on grammar:

> *focus on form* . . . overtly draws students' attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication (Long 1991:45-46, cited in Doughty & Williams, 1998:3).

In other words, when the learner's attention is drawn to linguistic structure, the meaning and use of that particular structure should be already apparent to the learner through context (Doughty and Williams, 1998:4). This concept differs from traditional grammar teaching, which often described the form in isolation. The relative effectiveness of the grammar teaching using various materials and activities has been described as follows:

Figure 6.1 More effective and less effective ways to teach grammar
(Stern, Figure 5.6, 1992:143, adapted from Celce-Murcia 1985)

More effective	**Less effective**
communicative activities	manipulative drills
context-embedded practice	context-free practice
text-based exercises	sentence-based exercises
cognitively demanding activities	cognitively undemanding activities
authentic materials	contrived materials
interesting and motivating content	dull or neutral content

Ellis (1985:217) suggests that two critical elements of formal instruction need to be considered: (1) specific grammatical features are selected for the learner's attention, and (2) this attention is manifest in a focus on the formal characteristics of the grammatical features. The level of importance of grammar is dependent on the specific proficiency objective aimed at in the course.

Key aspects in determining the importance of teaching grammar is learner factors such as age, proficiency level, and educational background. It is up to teachers to use their judgment as to how much grammar should be taught to their students. However, at university level, 'an interesting treatment of grammar can awaken an intellectual curiosity and change negative attitudes' (Stern 1992:134) towards language learning.

In formal instruction, however, focusing on form itself is not sufficient. When a focus on form is combined with communicative activities, it produces the best results (Ellis, 1994:659). The following section examines how formal instruction can be effectively carried out.

Explicit explanation

Formal instruction can be carried out by implicit or explicit methods. An implicit method provides learners with examples from which the rules can be induced whereas an explicit method clearly explains the rules with supporting examples. The following figure highlights the two different approaches.

Figure 6.2 Types of L2 knowledge (Ellis, 1997:112)

Types of Knowledge	Controlled processing	Automatic processing
Explicit	A A new explicit rule is used consciously and with deliberate effort	B An old explicit rule is used consciously but with relative speed
Implicit	C A new implicit rule is used without awareness but is accessed slowly and inconsistently	D A fully learnt implicit rule is used without awareness and without effort

A form-focused approach is most effective if rules are presented explicitly with examples showing how communication is facilitated by the formal structure (Stern, 1992, Ellis, 1997). According to Stern (1992:32), explicit instruction involves problem-solving and reasoning, while implicit instruction involves a less intellectually demanding, more intuitive way of learning. Some positive results have been reported by classroom-based studies. The findings indicate that combinations of explicit focus-on-form were particularly effective; i.e. 'promoting perceptual salience plus input flooding, directing learner attention to salient or frequent linguistic features, intonational focus plus corrective recasting and interaction enhancement' (reviewed in Doughty and Williams, 1998:243). Little (1994:107) argues that explicit knowledge of target language grammar means having conscious knowledge of grammatical facts, hence the grammar should be treated as any other factual knowledge – mathematical theorems, historical dates, social statistics, biological taxonomies. With explicit knowledge of target language grammar i.e., knowledge of how the relative clause operates, learners develop competence and are able to articulate how the grammar works.

Consciousness raising

Research has also found that drawing learners' attention to a particular form/structure and raising learners' consciousness produced good results (Fotos and Ellis, 1991; Fotos, 1993 cited in Ellis, 1994:644; Yip, 1994). When learners pay attention to and take notice of the form, and are aware of the usage of the language, they are likely to register mental form-meaning connections. Consciousness raising should be directed at helping learners to formulate explicit knowledge about the language which can boost learners' interlanguage competence. Consciousness-raising can be achieved by elaborateness and explicitness of the structure (Sharwood Smith, 1981). When the grammars of the L1 and L2 differ significantly, such as in the formation of relative clauses, this can be particularly useful as 'learners may need somewhat more explicit information about the L1–L2 contrasts in order to progress to more advanced developmental stages' (J. White, 1998:106).

Language Processing

However, instruction can be ineffective if the learners are not ready to process the input information. Earlier in this chapter we have noted that even with instruction, the developmental sequence cannot be altered. The reason is that

> ... there are constraints on learners' ability to acquire grammatical structures and, if formal instruction is to be successful, it has to work in accordance with the internal **processes** that govern why some structures are acquired before others (Ellis, 1994:627).

Pienemann's (1989) teachability hypothesis concerns exactly this issue. He argues that learners go through stages of grammatical acquisition and a stage cannot be skipped through formal instruction, because of the constraints which determine the course of natural acquisition. His theory was developed from Clahsen's (1984) processing strategies. Clahsen proposed processing strategies in the acquisition of German as a component of the Multi-dimensional model. The model is comprised of two dimensions; developmental grammatical features that determine different stages of acquisition, and grammatical features that vary within a given developmental stage. As his model is based on movement of constituents, Clahsen (1984:221) argued that, 'As far as syntax is concerned, processing complexity results from reorderings and restructurings of various levels of underlying linguistic units'. He proposes that a learner's degree of processing capacity is related to three processing constraints:

> (5.16) The Canonical Order Strategy (COS) allows only direct mappings of underlying structure to surface form due to the ease of processing (e.g. L2 learners of German begin with a basic SVO word order regardless of their L1).
>
> (5.17) The Initialization/Finalization Strategy (IFS) allows sentence-initial and sentence-final permutations of underlying form (e.g. adverb preposing).
>
> (5.18) Subordinate Clause Strategy (SCS) prohibits any sort of permutation in embeddings (e.g. in embedded sentences the finite verb appears in clause-final position) Clahsen (1988b:58).

However, the multidimensional model has not been widely applied to other languages, as its empirical research has been mainly limited to word order in German.

Developing his teachability theory, Pienemann (1998) came up with a more universally applicable 'processability' theory, which deals with the learner's ability to process linguistic information. In the acquisition of an L2, Pienemann argues that the learner needs to acquire not only linguistic knowledge about an L2, but also skills to process various linguistic information available to him/her. In L2 acquisition, learners have four different resources which they have access to; 1) lexical items; 2) morphological markers; 3) word order; and 4) prosody on-line (Levelt, 1989). However, we have little knowledge about why certain input takes precedence over others and why. As VanPattern (1996:17) has pointed out, the central issue for L2 acquisition research is to discover 'how learners' internal processors allocate attentional resources during on-line processing'. The term *processing* is used for 'attending to and detecting linguistic data in the input' (VanPattern, 1996:17).

Pienemann (1998) proposed a hypothesis whereby learners will acquire processing procedures according to their implicational sequence. The hierarchy of the processing procedure was devised on an implicational scale, in which the category designation of noun or verb is a prerequisite before assigning the subsequent categories. For example, a word needs to be present first before assigning any semantic and grammatical aspects to it: e.g. 'man' will take a singular verb form, 'drinks' but 'men' will take a plural form 'drink'. By the same principle, in order to process the subordinate clause, which is the highest on the processibility hierarchy, access to the lower level, the verbal phrase following the implicational sequence is essential. A significant implication of the processability hierarchy is that:

> ... it can be applied to any L2 acquisition in an array of any structural domains to predict the course of grammar development. However, it also acts as a set of constraints that operate on a number of other processes related to acquisition (p. 9).

In a given language, Pienemann's (1998:9) hierarchy of processing procedures predicts the following structural target language outcomes:

Hierarchy of Processing Procedure

Processing procedures	**Structural outcome**
5● Sub.-clause procedure	main and sub clause
4● S-procedure	inter-phrasal information exchange
3● Phrasal procedure	phrasal information exchange
2● Category procedure	lexical morphemes
1● Word/lemma access	"words"

(Lemma refers to lexical items and the syntax of each word
Levelt, 1989:191.)

Pienemann tested the validity of his Processability theory for Japanese, which is typologically different from the Germanic languages he investigated. He identified three levels of verbal morphology existing in Japanese:

a. no affix
b. lexical affix
c. phrasal affixes

He confirmed that empirical studies done on the acquisition of L2 Japanese show that learners of L2 Japanese went through the morphological hierarchy as predicted: from no affix to lexical affix and then to phrasal affix.

No empirical studies have tested the Processability of verbal morphology in Korean. However, we can apply the hierarchy of processing procedures to Korean in the acquisition of the relative clause. I propose that the developmental process follows these stages:

Stage 1: Production of verb phrases without the past tense markers:

(6.1) hakkyo-ey ka-ayo.
school-to go-END
'(I) am going to school.'

(6.2) cemsim mek-eyo.
lunch eat-END
'(I) am eating lunch.'

Stage 2: Production of verbal phrases using past tense markers, *ass/ess/yes*:

(6.3) hakkyo-ey ka-ass-eyo.
school-to go-PAST-END
'(I) went to school.'

(6.4) cemsim mek-ess-eyo.
lunch eat-PAST-END
"(I) ate lunch."

Stage 3: Production of subordinate clauses using the relativizers; *-nun, -(u)n, -ten, -(u)l*:

(6.5) hakkyo-ey ka-n Peter
school-to go-REL name
'Peter who went to school.'

(6.6) cemsim mek-un siktang
lunch eat-REL restaurant
'the restaurant which (where) (I) ate lunch.'

The relative clause belongs to the final stage, which means learners have to process the lower stages in order to be ready to learn the relative clause. If the relative clause is introduced to learners without learning the preceding stages, they cannot process the relative clause. Pienemann (1985) argues that even with instruction learners cannot override the developmental order. If learners were forced to learn a structure, for which they are not ready, the result would be counterproductive, as they would tend to avoid using the structure. Therefore, instruction will be beneficial if it focuses on structures from 'the next stage' in the learner's processing procedures.

The grammatical information for processing procedure is language-specific. It is therefore crucial that 'language-specific processing resources have to be acquired to make processing of the L2 possible' (Pienemann and Håkansson 1996:19 in Pienemann, 1998). For example, in English, it is necessary to have accessibility, number, and person for nouns but for German, gender and case also need to be

included for nouns. Hence, 'the task of acquiring a language includes the acquisition of the *procedural skills* needed for the processing of the language' (Pienemann, 1998:1).

Learners of Korean need to acquire not only linguistic knowledge about Korean but also the procedures for processing Korean grammatical information, which includes lexical categories, morphological markings, syntactic procedures, and word order rules. For example, within lexical categories learners need to know about two types of verb; the processive verb and the descriptive verb in order to apply various grammatical structures. In morphological markings, learners have to know which particles impart essential grammatical information in order to assign the function of words in the sentence. Knowledge of inflectional morphemes is necessary for various syntactic constructions. The left-branching and head-final characteristics for the syntactic procedure and the SOV word order rule are also vital pieces of information for learners to process the sentence.

Input Processing

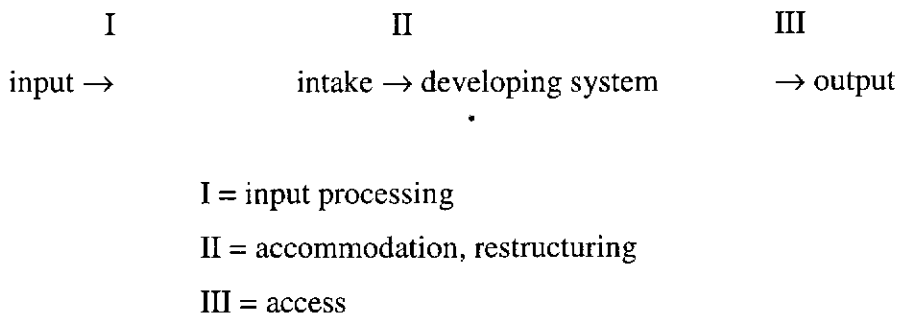
Since Krashen's (1985:2) 'comprehensible input' theory, 'input' is considered to be one of the most essential components of language acquisition for both L1 and L2:

> All cases of successful first and second language acquisition are characterized by the availability of comprehensible input.
> (Larsen-Freeman & Long, 1991:142)

> It is self-evident that L2 acquisition can only take place when the learner has access to input in the L2. This input may come in written or spoken form.
> (Ellis, 1994:26)

Without input, language acquisition would not occur. However, we have little insight into what process takes place once learners encounter the input; whether they take all of the input in and process it or whether they attend to only certain parts of the input. VanPatten (1996) argues that learners cannot attend to both the content and the grammatical form of message at one time, because only limited linguistic information can be processed. He proposes processing steps, which show how learners deal with input as below:

Figure 6.3 Three sets of processes in second language acquisition and use
(VanPatten, Figure 5-7, 1996:154)



In the processing of the input, whether it is spoken or written, the learner's primary task is to comprehend a message. VanPatten argues that learners need to use their cognitive ability to attend to and detect input and that input transforms to intake based on the principles outlined below (p. 14–42).

Principles (P) in L2 input processing (cognitive aspects)

P1 Learners process input for meaning before they process it for form.

- P1(a) Learners process content words in the input before anything else.
- P1(b) Learners prefer processing lexical items to grammatical items (e.g. morphological markings) for semantic information
- P1(c) Learners prefer processing 'more meaningful' morphology before 'less or non-meaningful morphology'.

P2 For learners to process form that is not meaningful, they must be able to process informational or communicative content at no or little cost to attention.

P3 Learners possess a default strategy that assigns the role of agent to the first noun (phrase) they encounter in a sentence. We call this the 'first noun strategy'.

- P3(a) The first noun strategy can be overridden by lexical semantics and event probabilities.
- P3(b) Learners will adopt other processing strategies for grammatical role assignment only after their developing system has incorporated other cues (e.g. case marking, acoustic stress).

The above processing principles suggest that *communicative value* is a motivating factor for learners paying attention to a particular form during input processing. When form and meaning compete for the learner's detection, generally learners notice meaning before form. Therefore, verbal inflections, nominal inflections, particles, functors are secondary to content words. For example, English 'yesterday' will be more readily processed compared to the past tense marker *–ed*; in Korean, *ecey* will be processed more readily compared to the past tense markers – *ass/ess/yess*. VanPatten claims that it is meaning-bearing input that can be transformed to intake.

Processing Instruction

The input processing theory is a psycholinguistically motivated approach, which aims to encourage learners to make better form-meaning connections by altering processing strategies. From the input processing theory, Vanpatten has proposed 'processing instruction'. The motivation of developing processing instruction came from the recognition of the mismatch in language teaching practices in which 'traditional grammar instruction conflicts with the more fluid, learner-centered, and content-based nature of communicative classroom' (p. 59). Three key components are essential for successful Processing Instruction (VanPatten 1996:60). They are:

1) explanation of the relationship between the given form and the meaning it can convey;
2) information about processing strategies, showing learners how natural processing strategies may not work to their benefit;
   [e.g. The role of particles instead of the SOV canonical word order in Korean]; and
3) "structured input" activities in which learners are given the opportunity to process form in the input in a 'controlled situation so that better form-meaning connections might happen compared with what might happen in a less controlled situation.

Although 'explicit explanation' looks similar to traditional grammar explanation, the crucial difference is making a link between form and meaning. When learners are provided with alternative processing strategies and told to pay attention to a

particular aspect of the input, they can make form-meaning connections more efficiently.

However, the most important aspect of Processing Instruction is in the *structured input activities* that are meaning-bearing, manipulated activities; 'without meaning-bearing input learners cannot build a mental representation of the grammar that must eventually underlie their use of language' (VanPatten, 1996:5). In structured input activities, learners are forced to pay attention to features of the language which express some meaning. VanPatten suggests that the activities are best used in the beginning of the instruction in the form of a right or wrong answer to check whether the learners are actually processing the form.

Guidelines for structured input activities (VanPatten, 1996:67-69)

1. Teach only one thing at a time. (e.g. Build verb conjugations during the course of the lesson rather than giving learners one large paradigmatic chart).
2. Keep meaning in focus.
3. Learners must do something with the input.
4. Use both oral and written input.
5. Move from sentences to connected discourse.
6. Keep the psycholinguistic processing strategies in mind.

As we have some insights into what processes take place on the learner's part when they encounter the input, instruction can be more effective if we incorporate those processing principles. Instruction therefore, must be designed by taking into consideration the linguistic characteristics of the language, together with processing procedures.

6.3 Pedagogical grammar

There is a big gap between linguistic, theoretical grammar and the grammar which teachers can explain to learners. Grammar teaching tends to be problematic, as most learners do not understand linguistic terminology. Although teachers devise some form of simpler version of grammar, it may not be systematic. The following section deals with concepts and practices of pedagogical grammar as they pertain to the teaching of Korean (as an L2 to adults).

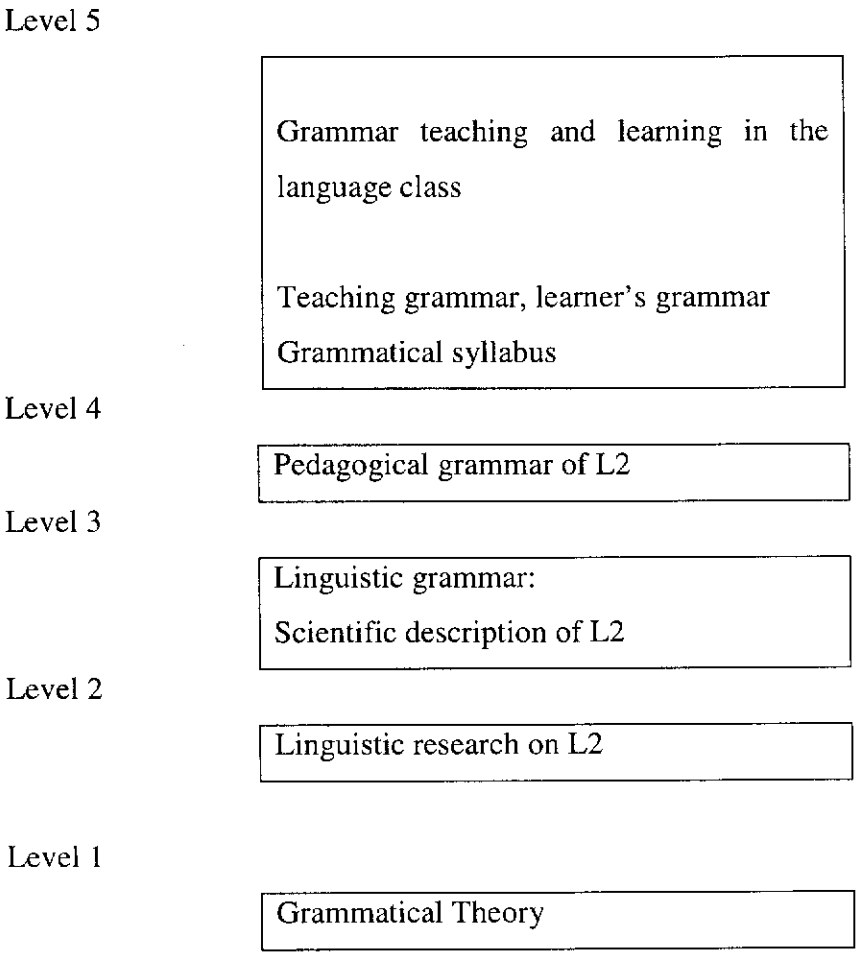
6.3.1 What is pedagogical grammar?

Pedagogical grammar is a grammar designed to help language teaching. In contrast to linguistic or theoretical grammars, pedagogical grammar stands for 'the types of grammatical analysis and instruction designed for the needs of second language students' (Odlin, 1994:1). Unlike L1 learners, adult L2 learners are inclined to be analytical about their learning materials and look for logical and explicit explanations about the language rules.

The following figure illustrates how pedagogical grammar derives from grammatical theory, how it incorporates linguistic research and linguistic grammar, and how it formulates rules for the L2 learners.

Figure 6.4 Conceptual level underlying grammar teaching

(Stern, H. H. Figure 5.2, 1992:131)



Stern (1992) explains that at level 5, all aspects of grammar teaching including the grammatical syllabus, teaching grammars, learner grammars, and the actual teaching of grammatical aspects of the second language through explanations, exercises and drills should be founded on pedagogical grammar. In short, pedagogical grammar is a combination of content and process (Little, 1994).

Odlin (1994:11) sees pedagogical grammar as a hybrid discipline, which incorporates four aspects of grammar: grammar as prescription, grammar as description, grammar as an internalised system, and grammar as an axiomatic system. Pedagogical grammar is time-consuming to develop. Odlin, however, argues that four interrelated considerations warrant why pedagogical grammar is beneficial to learners. These considerations are measured in the context of Korean below:

Instructional time:

Korean has been classified as one of the most difficult languages to learn by English speakers, requiring about 1,440 hours of instruction compared to 800 hours in Romance languages (Ringbom, 1987:66). Most learners of Korean in Australia start Korean at university level where a language major course provides approximately 500 hours of contact hours, a third of the required time.

Learner independence:

Time constraints in the course and limited instruction in Korean grammar mean that acquisition is incomplete for most learners of Korean as an L2. To achieve higher proficiency, learners have to continue their learning independently, based on the linguistic knowledge which they have acquired during the course. It is, therefore, important to build up complex grammatical knowledge through instruction so that learners can independently seek out language resources to advance their Korean (e.g. in-country employment).

Fossilization of knowledge:

Natural language acquisition tends to create fossilization in learners whereas instructed adult L2 acquisition can minimize fossilization. With instruction, learners' ability to analyse their performance can prevent fossilized errors (Ellis, 1990:169).

Expert guidance

As reviewed in 6.2, instruction is effective in L2 acquisition. A part of the reason for instruction being successful is undoubtedly due to teachers, as they can select, explain, highlight and contrast the features of the language effectively and efficiently.

Pedagogical grammar for teachers

Pedagogical grammar also caters for language teachers. Language teachers often have inadequate information about grammatical rules and are unable to explain certain features of the language. Pedagogical grammars can provide teachers with grammatical, functional and pragmatic information about the language and assist them in conducting classes and designing activities and materials. Pedagogical grammars therefore should:

- inform teachers about how language works according to our best models;
- highlight generalizations/regularities within a language that might otherwise be missed;
- identify certain cross-linguistic generalizations which might help predict areas of greater or lesser difficulty for learners;
- offer the basis for simpler (i.e., more learnable) ways of viewing complex phenomena;
- offer the basis for more accurate rule formulations;
- aid learners in identifying form-meaning relationships for syntactic structures and grammatical morphemes. (Hubbard, 1994:51)

Tomlin (1994) considers that pedagogical grammars are ultimately translations of linguistic descriptions for teachers. Teachers can use pedagogical grammar for effective instruction in two ways: 1) by providing explicit descriptions of grammatical structures in a simple and straightforward manner; 2) by providing the basis, either explicitly or by example, for creating additions and amendments to pedagogical descriptions (p. 143).

6.3.2 The criteria for pedagogical grammar

Important issues for pedagogical grammar concern the way we formulate rules for L2 learners from detailed theoretical linguistic descriptions. It has been argued that low-level rules can be 'left to take care of themselves' (Rutherford, 1980:63). The criteria for designing pedagogical grammar have been suggested to be:

> *truth, clarity, simplicity, predictive value* (precisely defining form-meaning relations), *conceptual parsimony* (i.e., being within the learner's understanding) and *relevance* (i.e., taking account of L1-L2 contrasts and hypothesising interlanguage rules) (Swan 1992, cited in Westney, 1994:72).

Formulating general rules is not an easy task, as there can be many instances where general rules cannot be applied. Language rules are defined as 'observed regularity with predictive value' in which there are two types of rules: 'rules of formation' which deal with mechanical regularities in language and 'rules of use' which deal with personal meaning and choice (Westney, 1994:74). Pedagogical grammar needs to provide both types of rules for learners in an accurate and usable manner.

For example, the use of *some* and *any* in English is explained as a general rule in a simple way but which covers all manners as below:

> *Some* is used if the idea is *restricted* or *limited* in some way. *Any* is used if the idea is *unrestricted* or *unlimited. Any* applies to all or none; *some* applies to part. (Lewis, 1986:33-35)

Linguistic terminology is not understood by beginners. Lewis (1986:74) has expressed the difficulty of using concepts in explaining language rules. For example, he argues that the past tense is essentially concerned with events that are *factual* but *remote.* However, the concept of 'remoteness' is difficult for learners to understand. The progressive aspect is another difficult concept, which focuses on *non-completeness* vs *completeness* contrasts, but 'incompleteness' is hard for learners to understand. This concern is particularly relevant to the relative clause in Korean as the relativizer is encoded with tense and aspect (to be discussed in 6.4.2.) yet, the gradual introduction of linguistic terminology is essential for language learners in order for them to build up complex grammar. However, the rules need to be

explained in natural language terms so that learners can understand and apply them easily.

Essentially, pedagogical grammar needs to have a combination of 'rules of thumb', which are informal pedagogical formulations often used by language teachers but limited in validity and scope, and 'rules of grammar' which are more sophisticated, linguistically sound, highly abstract generalisations and technical terms (Berman, 1979 cited in Westney, 1994:77).

In order to write excellent pedagogical rules, Westney (1994:83) proposes that it would be necessary to have access to:

(a) the best description of the language

(b) relevant psycholinguistic criteria that could determine how learners (whether considered collectively or individually) are best helped in acquisition

(c) a means of deriving appropriate pedagogical formulations from this information.

In the presentation of pedagogical grammar, Sinclair suggests that three types of regularity be included: **major statements** for the most general observations, corresponding closely to conventional rules; **usage notes**, where applicability is explicit and limited; and **productive features**, where the reader is told 'you can use the rules . . . in a creative and original manner' so that the learner can have more freedom in the use of grammar (1990:xvi).

6.4 Pedagogical grammar: the relative clause in Korean

Currently pedagogical grammar is sorely lacking in Korean language teaching. The gap between theoretical concepts of language rules and practical application has not been filled with an adequate pedagogical grammar. A pedagogical grammar that will assist learners and teachers to have a clear understanding of grammar so that they can make sense of it and also be able to use it is required. The following section deals with issues which should be considered, in the development of pedagogical grammar for the relative clause in Korean.

6.4.1 Timing of the introduction of the relative clause

In Chapter 5, we have found that learners' processing ability was a crucial factor for the ease or difficulty of acquisition of the relative clause in Korean. According to Pienemann, the relative clause is the last level of the processing procedures in the acquisition of grammatical structures. This suggests that processing procedure should be closely related to pedagogy. In other words, if the learner's morphosyntactic development has not reached the required stage, instruction in the relative clause will be of no use because learners cannot acquire structures out of the developmental sequence.

In the acquisition of the relative clause in Korean, in order to construct the relative clause using the relativizer, learners must first acquire the past tense morphemes, *-ass/ess/yess* in Korean. This is because, in the processing hierarchy of processing procedures, the past tense markers, *–ass/ess/yess* are phrasal morphemes and acquired early, whereas the relativizers are subordinate clausal morphemes which are acquired later.

Learners should also have acquired the attributive adjective before the relative clause. The attributive adjective is conceptually simpler than the relative clause. There is only one noun modifier, *–(u)n* for the attributive adjective, whereas the relativizer has different forms as in *–nun*, *–(u)n*, *–ten* and *–(u)l*. This indicates the semantic simplicity of the attributive adjective versus the conceptual complexity of the relative clause, as it denotes tense and aspect. As we saw in Chapter 3, the descriptive verb can be formed as a relative clause when the verb changes its linguistic category into a processive verb by suffixing an auxiliary verb i.e., *cohta* 'to be good' into *cohahata* 'to like'. Evidently linguistic complexity and conceptual complexity are closely tied (Newmeyer, 1998).

However, as far as the NPAH is concerned, the findings in Chapter 5 reveal that there is no correlation between the order of difficulty and the NPAH. The implication of this is that it is not necessary to introduce noun phrases to learners in the order of subject > direct object > indirect object > object of postposition > genitive. The NPAH is not a developmental sequence but an implicational universal.

6.4.2 Contents of pedagogical grammar: the relative clause in Korean

The development of a complete pedagogical grammar for the relative clause is beyond the scope of the present study. However, in the following section, I propose

some suggestions, which need to be considered in developing a pedagogical grammar. Since the characteristics of the relative clause in Korean are markedly different from English, and because English is commonly used as a medium for instruction and interlanguage grammar explanation, a clear contrast in the construction of the relative clause between English and Korean would be beneficial for adult learners. We can illustrate, using examples, how the relative clause is constructed in Korean and in English, and thus show learners the contrasting features (examples are from Chapter 1):

(1.1) na-nun [Academy sang-ul pat-*un*] **yenghwa**-lul po-ass-ta.
I-TOP Academy award-ACC receive-REL movie-ACC see-PAST-END

(1.2) 'I saw a **movie** [which received an Academy award].

• Highlight head-final characteristics

Draw learners' attention to the position of the head noun (in bold letters), and make the point that the relative clause precedes the head noun in Korean, whereas in English the head noun is stated first and is followed by the relative pronoun and the relative clause.

• Highlight left-branching, head-final characteristics

When introducing the relative clause, the consistency of the left-branching direction in Korean should be highlighted in phrase and clause constructions: i.e., all noun modifiers including determiners, numerals, attributive adjectives, genitives, relative clauses and noun complement clauses precede the head noun. The learners' attention should be drawn to the contrast between Korean and English between the formation of the adjective and the relative clause in regard to the position of the head noun:

(6.7)	English	AN	a pretty **girl**
(6.8)		NRel	the **girl** [who went to America]
(6.9)	Korean	AN	yeppu-n **sonye**
			pretty-ATTR girl
			'a pretty girl'
(6.10)		RelN	[mikwuk-ey ka-n] **sonye**
			America-to go-REL girl
			'the girl who went to America'

• **The morpheme *–(u)n***

It is important to highlight the fact that the morpheme *–(u)n* is used for both the attributive adjective and the relative clause. As claimed in Chapter 3, the function of this morpheme is to modify or restrict the noun; and the meaning is 'perfective aspect' as a single prototypical meaning. Aspect is a difficult concept to explain to learners, therefore teachers need to understand the form-meaning relationship between two features so that they can explicitly explain this to learners using simple terms. The proposed form-meaning relationship between the attributive adjective and the relative clause is listed again below.

Figure 3.2 Functions of grammatical morpheme *–(u)n*

Form-meaning of *–(u)n*

Form	**Syntactic category**	**Function**	**Meaning**
Grammatical morpheme *–(u)n*			Perfective aspect
Descriptive verb + *–(u)n*	Attributive adjective	modifying	permanent state
Processive verb + *–(u)n*	Relative clause	restricting	completion of action or process

"Aspect refers exclusively to the action or state described by the verb" (Bybee, 1985:21). Therefore, when the morpheme *–(u)n* is attached to a descriptive verb stem, the meaning is completion of a state – a permanent state, equivalent to the English adjective. With a processive verb stem, it means completion of an action – a past event. For learners of Korean, it is vitally important that they understand that there are two major types of verbs in Korean. The characteristics of the processive verb and the descriptive verb must be clear to them. The importance of the learners' understanding of the verb cannot be over emphasized as 'the verb is the engine of syntactic structure' and 'heavily loaded with syntactic information' (Little, 1994:117).

A pedagogical grammar should explain the meaning of the perfective aspect using example of the descriptive verb and processive verb, and show learners how they are interpreted differently according to the verb type as outlined below:

• Descriptive verb+ *(u)n* : Completion of situation/ permanent state

(6.11) pissata pissa-n cha
to be expensive expensive-ATTR car
'expensive car'

(6.12) cohta coh-un hakkyo
to be good good-ATTR school
'good school'

Note: The morpheme *–(u)n* acts like a time stabilizer and makes the state a permanent state. This is equivalent to the English adjective.

• Processive verb + *(u)n* : Completion of action/ past event

(6.13) kata ka-n haksayng
to go go-REL student
'the student who went'

(6.14) mekta mek-un umsik
to eat eat-REL food
'the food which (I) ate'

Note: The relativizer *–(u)n* indicates that the action is completed. Therefore, at the time of utterance, it belongs to the past; the event occurred in the past.

• Relativizer

Learners need to be aware of the fact that although Korean does not have relative pronouns like the English 'who', 'which' and 'that', the relativizer has the same function as the relative pronoun in connecting the relative clause and the head noun. The four relativizers; *-nun, -(u)n, -ten and –(u)l* with their respective meanings should be introduced first:

–(u)n : past completion
–nun : non-past incompletion
–ten : past incompletion
–(u)l : prospect

Notes: 1) In addition, the past tense marker *–ass/ess/yess* can be combined with *–ten* and *–(u)l*:

–ess-ten : past incompletion

–ess-ul : past prospect

2) The past marker *–ass/ess/yess* cannot be combined with *–(u)n* or *–nun.*

3) The honorific suffix *–si* can be inserted immediately before the relativizer.

In learning tense in L2 acquisition, there is some empirical evidence to suggest that learners perform better when the input includes temporal adverbials in the sentence compared with the input where tense is marked only morphologically. As Bardovi-Harlig (1992) has pointed out:

> ... learners mark time early in the acquisition of verb morphology through lexical items (e.g., yesterday, last week) and only subsequently begin to add past-tense verb markings to their linguistic repertoire (cited in VanPatten, 1996:22).

As the relativizer in Korean is a dependent morpheme, it is non-salient. Therefore, the relative clause is better introduced with time adverbials to help acquire the relativizer. For example, a pedagogical grammar could provide a comparison with the temporal adverbial.

i) present/incomplete: past/complete

(6.15) *cikum* [ilk-nun/*ilk-un] chayk
now [read/read] book
'the book [which (I) am reading'/*which (I) read] now'

(6.16) *ecey* [*po-nun/po-n] yenghwa
yesterday [watch-REL/watch-REL] movie]
'the movie [*which (I) watch/which (I) watched] yesterday'

ii) present/habitual: past/complete

(6.17) *mayil* [ka-nun/ka-n] gym
everyday [go-REL/go-REL] gym
'the gym [which (I) go/ which (I) went] everyday'

(6.18) *ecey* [*po-nun/po-n] yenghwa
yesterday see-REL/see-REL movie
'the movie [*which (I) see/ which (I) saw] yesterday'

iii) past/incomplete: past/complete

(6.19) *akka* nay-ka [mek-ten/mek-un] sakwa
before I-NOM [eat-REL/eat-REL] apple
'the apple [which I was eating/ which I ate] before'

(6.20) *elil-ttay* [mek-ten/mek-ess-ten] umsik
young-when [eat-REL/eat-PAST-REL] food
'the food [which (I) was eating/ which (I) had eaten] when (I) was young'

iv) future/prospect: past/prospect

(6.21) *naynyen-ey* [ka-l/*kass-ul] hakkyo
next year-in [go-REL/went-REL] school
'the school [which (I) am going/ which (I) could have gone] to next year'

(6.22) *ecey* i sikan-un cemsim-ul [*mek-ul/mek-ess-ul] sikan
yesterday this time-TOP lunch-ACC [eat-REL/ eat-PAST-REL] time
'yesterday this time is the time [*when I would eat/ when I should have eaten lunch]'

6.4.3 Instruction of the relative clause in Korean

The key question is how best to integrate grammar into the communicative syllabus. In addition to aspects of effective instruction considered in 6.2.3, some practical issues are also considered below:

• Grammar Practice:

Traditionally, grammar practice usually involves drills and exercises. Drills are highly restricted exercises, which allow only one correct answer, whereas exercises can be more open-ended. The recent trend of grammar practice is 'towards contextualized drills set in a situation which is relevant to learners' (Stern, 1992:149). Learners can practise the structure and gain a more meaningful and

holistic picture as to how grammar is used in discourse. This can begin with lexical manipulation in which learners practise the relative clause in "propositional clusters", as Rutherford (1987) has suggested in verbs with associated noun phrases.

We can also incorporate the notion of the mental lexicon. The mental lexicon utilizes four links in words: coordination (e.g., knife and fork), collocation (e.g., happy family; sharp knife), superordination (e.g., animal and dog) and synonymy (famished and starving) (Aitchison 1987:74f cited in Little, 1994:116). In the case of the relative clause, collocation would be very effective for grammar practice. For example, talking about food as a topic, learners can practise relative clauses, which have associations with the head noun thus:

(6.23) mas-iss-nun umsik
taste-have-REL food
'the food which is tasty'

(6.24) nay-ka cohaha-ten umsik
I-NOM like-REL food
'the food which I used to like'

(6.25) emeni-ka mantulechwu-si-n umsik
mother-NOM make-HON-REL food
'the food which my mother made for us'

(6.26) nay-ka cacwu ka-nun siktang
I-NOM often go-REL restaurant
'the restaurant which I often go to'

This type of grammar practice will enhance the correlation between form and function/meaning connection in a systematic way.

• Spoken Activities

Since the basic functions of the relative clause are 'identification' and 'characterization', spoken language activities can employ tasks that cannot be performed without using the relative clause. Tasks could include such activities as

describing a person in a picture or identifying an object in the room. In such a task, learners need to focus on meaning (i.e. message content) for communication but the task also requires them to use the relative clause.

Once the form-function of relative clauses is introduced, it is important that learners have plenty of input in spoken and written discourse. Ultimately language is for communication in the discourse forms of either production or comprehension, therefore, 'pedagogical grammar must address how grammatical constructions are deployed in discourse' (Tomlin, 1994:141). For example, discourse based written texts can be used for completion exercises, where learners fill in the blanks with an appropriate relativizer.

Since processing is incremental from left-to-right, as we saw in Chapter 4, it is important that learners learn how to process the semantic and grammatical information on-line. Language teaching should include tasks and activities to assist learners in processing information, so that they do not backtrack, especially in the comprehension of written Korean involving relative clauses.

- **Revision**

In L2 acquisition, regular revision of grammatical items is vitally important for learners. It is suggested that revision should not be a repeat of what learners have already come across but expanded in new contexts. Stern states:

> No item in the syllabus that has once been introduced should ever be lost sight of. Each item is periodically reintroduced, and not simply in its original form; instead it is placed into ever-new contexts or associated with additional information (Stern 1992:139).

6.5 Summary

In this chapter, we have examined the questions of effective language teaching practices with a particular focus on the relative clause in Korean.

Research on instructed language teaching to date suggests that formal instruction is indeed effective. Although instruction cannot alter the order of acquisition, it accelerates the rate of learning and helps learners to achieve ultimate language attainment. According to Ellis (1990:171), 'learners who receive formal instruction outperform those who do not'. For effective instruction of the relative clause in

Korean, the following aspects need to take into consideration:

- The findings of the acquisition study presented in Chapter 5 do not support markedness theory. There is no need to present noun phrases in the NPAH order.
- A focus on form by explicit explanation and raising learners' consciousness will help them to formulate explicit knowledge about the language.
- According to Pienemann's processing procedure, in order to process the relative clause, learners must have learnt the past tense markers (phrasal morphemes) i.e., *-ass/ess/yess* prior to the relativizer, which is a clausal morpheme. Otherwise, instruction is futile, as acquisition would not occur.
- Learners need to acquire not only linguistic knowledge but also the specific processing procedure of Korean; namely, lexical categories e.g., descriptive and processive verbs; morphological markings e.g., particles and verb inflectional endings; head-final, left-branching direction and SOV word order.
- VanPatten's Input processing suggests that learners attend to meaning before form. Input, which is meaning-bearing, becomes intake and is later turned into output.

Pedagogical grammar is concerned with both content and process. With regard to content, pedagogical grammar must provide an accurate and explicit description of the language rules in a simple and usable manner. Pedagogical grammar must have predictive value, which learners can easily fall back on for interpretation and clarification. In considering the limited instructional time frame of formal language learning setting, pedagogical grammar can help learners build up their confidence so that they later can become independent language learners.

Based on the explanation and analysis made in this study on the form-function of the relative clause and the attributive adjective (Chapter 3), together with the processing of the relative clause (Chapter 4), I make some suggestions for the development of a pedagogical grammar. These include:

- Highlight left-branching and head-final characteristics.
- Show the form-function of *–(u)n* for the attributive adjective and the relativizer.
- Compare the form-function of the relativizer *–(u)n, –nun, –ten* and *–(u)l* with

their respective meanings.

- Use comparisons of the relativizer with and without the time adverbial.
- Discourse-based communicative activities are essential for achieving the best outcome for learners.
- Incorporate the notion of the mental lexicon.

For effective instruction, it is necessary to have access to accurate theoretical grammar for the development of a pedagogical grammar and the identification of processing procedures. These two questions have been the main focuses of this study. I will present a summary and conclusion of the study in the following Chapter 7.

Chapter 7 Summary and conclusion

7.1 Summary of findings

In this study I have investigated three pertinent aspects of the relative clause in Korean: the form-function relationship of the relative clause, the processing of the head-final relative clause and the acquisition of relative clauses as an L2. I have clarified some critical issues in Korean linguistics in the context of universal typology and processing theory. The findings of my research reveal that language phenomena can be explained by two fundamental ordered relations that are cross-linguistically identified: they are *time* and *linear order*. When grammatical elements are processed in real-time, *processing* of the elements in linear ordering provides explanations for grammaticalization and conceptualization of the relative clause in Korean. To draw this conclusion, I have systematically and comprehensively analysed morpho-syntactic constructions of the verb phrase, the attributive adjective and the relative clause and compared them with English. The following is a summary of the chapters, which dealt with specific objectives of this study. The major findings are also listed.

In Chapter 2, I examined the salient characteristics of the relative clause in Korean in the context of the universal properties of the relative clause. One of the most notable features is the head-final and left-branching construction in Korean compared with the head-initial, right-branching construction in English. This particular contrasting feature is due to the processing constraint in relation to the main sentence in Object-Verb word order (Slobin, 1971; Lehmann, 1978; Comrie, 1981).

Korean utilizes the gap strategy in the construction of the relative clause in which the coreferential noun is deleted in the relative clause along with the postposition particles. The relativizer in Korean is unique in its form and functions: in the form of a dependent morpheme, the relativizer is encoded with tense and aspect in the clause-final position. Using examples, I examined the four basic relativizers; *–nun, –(u)n, –ten* and *–(u)l* plus *–ess-ten* and *–ess-ul* for their respective semantic functions. The relativizer is obligatory in Korean, whereas the object relative pronoun can be omitted in English.

The relativization of nominal phrases in Korean was discussed with reference to the NPAH. Korean allows Subject, Direct Object, Indirect Object, Object of Postposition, and Genitive but does not allow the Object of Comparison. The resumptive pronoun is allowed only in the genitive position. The distinction between restrictive and non-restrictive relative clause is not significant in Korean. However, there are some differences between the relative clause and the complement clause despite their syntactic similarities. The characteristics of the relative clause highlight challenges that learners face in the acquisition of Korean as an L2.

In Chapter 3, I investigated the form-function of the attributive adjective and the relative clause. My research identified that Dixon's (1982) seven universal adjective types – dimension, physical property, colour, human propensity, age, value and speed – are mostly expressed by descriptive verbs in Korean. I also demonstrated that Thompson's (1988) property concept words, used for the classification of universal category of the adjective, are mostly expressed in relative clauses in Korean. This indicates a very close syntactic and semantic relationship between the attributive adjective and the relative clause. In order to find out the distinction between the two features, I analysed the linguistic categories of the descriptive verb, attributive adjective and the relative clause based on universal typology. I proposed that the Korean descriptive verb belongs to a category between the verb and the adjective in Givón's time-stability continuum, as it is the temporary time-stable state. I also confirmed the status of the descriptive verb as being between the adjective and the verb in Croft's (1991) prototypical correlations of syntactic categories as the descriptive verb has characteristics of both the adjective and the verb.

With clarification of the syntactic categories of the descriptive verb, the attributive adjective and the relative clause, I identified the semantic function of the modifying ending, *–(u)n*. I proposed that the modifying morpheme *–(u)n* has a single prototypical semantic function, which is the perfective aspect. It acts like a time stabilizer. With this single meaning, the modifying ending *–(u)n* has a multitude of functions for the formation of the attributive adjective, the relative clause and the noun complement clause. I argued that the perfective aspect is interpreted differently according to the verb types: when the descriptive verb is suffixed by *–(u)n*, it denotes a permanent, time-stable state which is equivalent to the adjective in English. With the processive verb, perfective aspect means a completion of action or process. Hence, at the time of utterance, it belongs to the past. This clarifies an unanswered

question in Korean linguistics to date: it explains the prototypical semantic function of the modifying ending *–(u)n*, which is used for the formation of the attributive adjective and the relative clause, and the complement clause. I verified this distinction with the change of the syntactic categories; when the descriptive verb is combined with auxiliary verbs e.g., *–a,ecita* (active); *–a,ehata* (inchoative); *–a,ekeyhata* (causative), it is transformed into the processive verb and subsequently it can become a relative clause when suffixed by *–(u)n*.

This finding precisely illustrates a very important linguistic phenomenon, the iconicity of concept – 'the structure of a grammatical construction will reflect the structure of the complex concept it expresses' (Croft, 1990:174). In other words, while the attributive adjective is only describing a state, which is time-stable and permanent, the relative clause expresses a process, which inherently involves time from the beginning to an end. That is why the attributive adjective needs only one morpheme *–(u)n* in the formation, whereas the relative clause needs a series of morphemes including *–(u)n* to denote tense and aspect.

I also used English pre-nominal and post-nominal adjectives to confirm my argument. The English prenominal adjectives have the same semantic function as attributive adjectives in Korean. However, postnominal adjectives are close to relative clauses in Korean, as they tend to reflect temporary states or specific events. In other words, complex concepts cannot be expressed by the adjective.

I pointed out that the functions of the relative clause in Korean are largely similar to English in providing background information about the participants and props. However, the 'grounding' function is not used in Korean, due to its head-final relative clause construction and the SOV matrix sentence order. This particular function is usually used by the conjunctive ending, *–nuntey* which provides background information.

In summary, my main findings in relation to the form-function of the attributive adjective and the relative clause were:

1) Universal property concept words (Thompson, 1988) are mostly expressed in relative clauses in Korean.

2) The descriptive verb occupies its place in the linguistic categories between the attributive adjective and the verb.

3) The modifying ending *–(u)n* has the prototypical semantic function of the perfective aspect.

4) The form-function relationship of the attributive adjective and the relative clause confirms iconicity in that the complex form expresses complex concept.

Chapter 4 investigated the implication of processing the head-final and left-branching relative clause in Korean. The analysis of various compositions of the verb phrase reveals that the linear ordering of elements in the verb phrase reflects the temporal ordering of the event. The semantic function of the auxiliary verb is crucial here, as each auxiliary verb adds aspectual meaning onto the previous verb(s) and denotes a concept i.e., manner, path, deictic, etc.

When the verb phrase is suffixed by the relativizer, the linear ordering of the elements in the relative clause and its relationship with the head noun becomes clear. I demonstrated that grammaticalization of the verb phrase and the relative clause is not only highly regulated by grammatical rules but is also directly related to conceptualization. When the grammatical information is processed, the concept denoted by each grammatical element progressively builds up conceptualization. This phenomenon confirms that the iconicity of the distance (Newmeyer, 1998; Haiman, 1985; Bybee, 1985) is relevant to the construction of the relative clause i.e., the concepts that are critical to the core event verb (e.g. passive and causative) are closer to the verb stem, and the relativizer (which modifies the head noun) is positioned immediately before the head noun.

The implication of presenting the relative clause before the identification of the head noun was analysed in light of processing theory (Levelt, 1989; J. Hawkins, 1994; Langacker, 1997; Pienemann, 1998). Contrary to the views presented so far, I argued that because of the left-to-right and incremental nature of processing, the head noun is semantically restricted by the relative clause in Korean. I proposed an explanation for this argument based on the processing procedure: that is, lexical and grammatical information is processed simultaneously with mental conceptualization. Therefore, by the time the relative clause is constructed, the conceptualised message looks for a semantically agreeable head noun. There is no time for backtracking because language activities occur on-line in real time.

I demonstrated that the role of the relativizer is significant in the processing of the relative clause in Korean. In the long recursive, left-branching relative clauses, the relativizer provides a vital parsing cue to set a clausal boundary and to indicate the function of the clause. Its function is similar to the function of particles.

Findings (continued):

5) The linear ordering of elements in the verb phrase reflects the temporal/sequential experiences of the event.
6) The linear ordering of the elements mirrors the iconicity of distance between the relative clause and the head noun. i.e., the element which is critical to the event is close to the verb stem and the element which is relevant to the head noun is close to the head noun.
7) Due to the incremental, left-to-right processing, the relative clause has semantic constraints on the head noun.
8) The relativizer, as a clause ender, provides a vital parsing cue in the processing of the relative clause in the sentence.

Chapter 5 reported the findings of the acquisition of relative clauses in Korean as an L2. The overall order of difficulty was determined by three tasks: a combination task, a completion task and a grammaticality judgment task. These reveal that the overall order, OP>IO>SU>DO>GE is not associated with the NPAH which is SU>DO>IO>OP>GE. The result also does not support the two major theories which tried to explain the order of difficulty in the acquisition of relative clauses as an L2: first, markedness theory fails to explain the order of difficulty exhibited in Korean because OP and IO, which are more marked than SU and DO, were easier; second, configurational analysis is also unable to explain the result of this study because the extraction sites of both OP and DO are the closest from the head noun and therefore are assumed to be easier than the other elements yet, their orders appeared as the 1st and 4th in Korean.

In considering the different linguistic knowledge and processing requirements of each task, I explained the significance of the order of difficulty according to the task. I argued that the reason for OP being the easiest in the combination task was due to the lexical information of the coreferential noun phrase as it invariably denotes a place with the location particle; OP projects semantic simplicity. This observation is

also noted in L1 acquisition studies suggesting some lexical connection between L1 and L2 acquisition:

> The indications are that L2 lexical processing does not in essence differ from L1 lexical processing and that there is at least some degree of interconnection between L1 and L2 lexical storage and processing (Little 1994:107).

In the GJ task, the learners performed best at the judgement of IO. I argued that this is due to processing ease. The syntactic structure of IO, which necessarily includes meaningful elements; subject, object and verb in the canonical word order of S-O-V, made the parsing task easy for them. The case particles played a crucial role in the form-function mapping procedure indicating 'who did what to whom'. The temporal adverbial in sentence initial position also helped the learners' judgement of the correct relativizer, as the relativizer is encoded with tense and aspect.

The results by L1 backgrounds indicate that English speakers were better at the judgment of Object position than Subject. Their main source of errors was in the relativizer; they also produced notably more resumptive pronouns. This result is inline with other studies (Tarallo and Myhill, 1983; R. Hawkins, 1989). However, mirroring results of other studies, we cannot be certain whether L1 background has any influence on the acquisition of the relativizer. Interestingly Japanese speakers made fewer errors than English and Chinese on the relativizer, but this might have been due to avoidance.

The findings of this study support R. Hawkins's (1989) view that learners' difficulty of particular relative clause types is not associated with a theory of markedness, but is due to 'learners' real-time processing capacity, and their ability to parse primary data' (p.176). However, I argue against his view that learners first construct rules for relative clauses on the basis of adjacent categories in surface configurations. In Korean, in order to select and use the correct relativizer, learners need to process the whole clause, including the temporal adverb, which is usually in sentence-initial position.

Findings (continued):

9) The overall order of difficulty exhibited in this study is OP>IO>SU>DO>GE. This shows little association with the NPAH.

10) Markedness theory and configurational analysis are unable to explain the order exhibited in this study.

11) Learners were best at combining OP in the combination task. This is due to the semantic simplicity projected by the lexicon of the OP noun phrase with the location particle.

12) In the GJ task, IO appeared the easiest, due to the processing ease which was contributed by the syntactic structure of IO, as it has meaningful elements in the SOV canonical word order specified by case particles denoting 'who did what to whom'.

13) Learners utilized multiple strategies to carry out the tasks. These included: [use of mental lexicon, processing of SOV canonical word order, case particles, and temporal adverbs in sentence initial position].

14) For the correct selection of the relativizer, learners of Korean need to process the whole clause. Therefore, R. Hawkins's (1989) subjacency and animacy arguments do not hold for Korean.

Chapter 6 discussed the effectiveness of instruction and the need for the development of pedagogical grammar in Korean. A number of empirical studies have shown that learners who received instruction on the relative clause performed significantly better than learners who acquired the language in a natural setting. Furthermore, when learners received instruction on the marked positions on the implicational scale, they could generalize less marked positions automatically. This has implications for the presentation of grammatical items.

In a formal classroom language-learning environment with adult learners, a form-focused instruction is particularly effective. Learners can achieve the best outcomes if they are exposed to explicit and elaborate rules of the language combined with communicative activities. Raising consciousness and drawing the learners' attention to the contrasting features of the relative clause in Korean with English (as an interlanguage) or their L1 would be particularly beneficial to adult learners.

However, instruction in the relative clause may be futile if learners' developmental stage is not ready to process the relative clause. According to Pienemann's processability theory, the relative clause belongs to the last level, which means that acquisition of the other five stages are prerequisites for the processing of

the relative clause. In the case of Korean, the acquisition of the attributive adjective is necessary prior to the acquisition of the relative clause. The past tense morphemes, *-ass/ess/yess* should also be learnt before the relativizers. Learners of Korean need to acquire not only linguistic knowledge about Korean but also the procedures for processing Korean grammatical information, including lexical categories, morphological markings, syntactic procedures, and word order rules.

The input processing theory (VanPatten, 1996) shows when learners encounter input information, they attend to meaning before form; only meaningful input can transform input into intake and subsequently to output. With these insights into what processes take on the learner's part, 'processing instruction' claims to be superior when compared to traditional instruction. The most significant aspect of this approach is that structured input activities are formulated in view of the learners' processing strategies, to make effective form-meaning mapping (VanPatten, 1996).

As far as the NPAH is concerned, the results presented in Chapter 5 reveal that there is no correlation between the order of difficulty and the NPAH. The implication of these results suggest that it is not necessary to introduce noun phrases to learners in the order of subject > direct object > indirect object > object of postposition > genitive in the relativization.

I have thus raised the issue of developing pedagogical grammar in a more systematic way. It is currently lacking in Korean language education. Using detailed and highly technical descriptions of theoretical linguistics, we need to provide accurate, simple and usable grammar, which covers content and process. I have made some suggestions for the development of pedagogical grammar for the relative clause in Korean.

7.2 Implications of findings and future research

This study has demonstrated the validity of using universal typology in researching the form-function of the relative clause in Korean. The universal semantic types of the adjective are expressed in different syntactic properties in Korean. As Dryer (1997:140) pointed out, 'languages tend to exhibit a much smaller number of distinctions in linguistic categories than exist in functional domains', the classification of linguistic categories of the descriptive verb, the attributive adjective and the relative clause in cross-linguistic contexts has been proved to be the correct methodology in defining their relationships. When we analyse the syntactic

transformation from one linguistic category to another and follow how the semantic function changes accordingly, and then compare their semantic functions with other languages, a very important cross-linguistic phenomenon emerges.

Croft's (1990) observations in the case of Korean are accurate: the attributive adjective is suffixed by only a single morpheme *–(u)n* and it expresses a stable and permanent state; on the other hand, the relative clause is expressed by a series of the relativizer to describe actions and events, which always occur with reference to time. As Croft pointed out:

> The iconicity hypotheses would propose that the concepts which are always, or frequently, expressed by simple grammatical structures are cognitively primitive and those expressed by complex structures are cognitively complex. (p. 173)

The difference between cognitively 'primitive' and 'complex' is manifested by the involvement of *time* – the first dimension for construing any ordering relations, such as "precedence" (Givón, 1979). It is fascinating to realize a very specific language phenomenon is governed by and explained by 'the most fundamental experiential criteria we use for identifying the self, other humans and the entities in the phenomenological universe at large' (Givón, 1979:320).

This study has also uncovered another fundamental ordering relation at work in grammatical relations of the verb phrase and the relative clause construction in Korean. The internal linear ordering of the verb phrase reveals how the relationship between grammaticalization and conceptualization is mapped out. I have verified the grammaticalization of the verb phrase in Korean using Dixon and Aikhenvald's (1997) typology of syntactic derivations and associated construction types, and found that the grammatical morphemes are related in linear ordering by strict grammatical rules, which progressively build up conceptualization. This process is realized by each grammatical morpheme denoting a concept of various cross-linguistic cognitive and functional principles, such as passive, causative, desiderative and aspect etc. Langacker (1997:250) explains, "A basic kind of sequenced mental occurrence is the observation of events as they happen in real time" as each grammatical element constitute to form "a coherent, integrated experience because we conceive of each in relation to its immediate predecessor, noting either constancy or change". This cross-

linguistic principle is the reason for the similar linear ordering of inflections identified in this study and with Bybee's (1985) ranking, disregarding language specific inflections such as the honorific suffix.

The relationship between the relative clause and the head noun must be explained from language-specific grammatical rules, i.e., the head-final construction of the relative clause in Korean. However, there is a fundamental principle which needs to be taken into consideration in determining the relationship, regardless of the branching direction; that is, processing is incremental from left to right and is on-line in real time. Therefore, back-to-front processing is unlikely to occur. The head noun in Korean cannot possibly affect the relative clause syntactically or semantically, as it is not encountered until late.

The results of my empirical study on the acquisition of relative clauses in Korean as an L2 indicate that processing is the main reason for the order of difficulty exhibited in this study. Configurational analysis is correct in saying that the difficulty of relative clause types for learners is dependent on learners' ability to parse linear ordering of grammatical elements. However, the critical shortcomings of configurational analysis are that it ignores the fundamental differences between head-final and head-initial languages and also the fact that language processing takes place on-line, in real time. The construction of the relative clause is in the linear order of [relative clause + head] or [head + relative clause], thus has major implications for learners when parsing the relative clause. Learners of Korean encounter the modifying, restricting information first without any knowledge of the head noun. On the other hand, learners of English start with the head, working with the information provided by the head noun to form a relative clause.

The results of this study show that linear ordering is the core element for grammatical relations and conceptual developments in the relative clause. This study has proven that processing is an integral part of grammar and the acquisition of the language. This view is further enhanced when we consider the latest developments in L2 acquisition studies i.e., processing procedures and input processing. Langacker (1997:249) emphasizes, "A dynamic view of conceptualization is essential to a principled understanding of grammar and how it serves its discourse and interactive functions."

A number of important issues have arisen from this study: although processing theory holds much promise for explaining linguistic phenomena cross-linguistically,

research on this topic to date has been limited to only a few languages. Research on the acquisition of verbal morphology in Korean will be particularly interesting for testing the theory of processing procedure. It has been found in L1 acquisition studies that Korean-speaking children acquire the relative clause earlier than English-speaking children, because of the morphosyntactic similarities between the attributive adjective and the relative clause. A comparative study on the acquisition of adjectives and relative clauses between English and Korean as an L2 would produce useful results for our understanding of the processing procedure. A comparison with Japanese in the acquisition of relative clauses would also be interesting since Japanese does not utilize the relativizer.

The importance of lexicon in language acquisition deserves more attention, as lexical meaning itself can affect acquisition (Little, 1994). The findings of this study clearly show that lexical information played a significant part in the combination task as 'the syntactic properties of a lexical item can largely be predicted from its semantic description' (Dixon, 1982:8). As mentioned earlier in this chapter, interconnection between the L1 and L2 in lexical storage and processing would be a fascinating area for future research.

Empirical research on input processing instruction is another area where we can further test the effectiveness of linking form and function in a communicative language learning environment. We need to incorporate more psycholinguistic aspects into language teaching for effective instruction.

This study has been a holistic inquiry into the relative clause in Korean in that it conducted research into theoretical linguistics and was an empirical study. The specific Korean linguistic issues have been investigated and explained in the context of cross-linguistic principles, and the findings, together with the results of the acquisition study, have been incorporated into pedagogical considerations for effective language teaching.

Appendix I : Sentence Combination Task

Combine two sentences using VS+는, (으)ㄴ, (으)ㄹ, 던, or 았/었/였던.
The noun in bold letters in the first sentence needs to be modified with the information in the second sentence. Here are some examples with the English translation.

e.g. 1. **영수**는 대학생이다. 영수는 한국에서 왔다.
Youngsoo is a university student. *Youngsoo came from Korea.*
→ 한국에서 온 **영수**는 대학생이다.
Yongsoo who came from Korea is a university student.

2. 피터는 **책**을 읽었다. 피터는 어제 책을 샀다.
Peter read a book. *Peter bought a book yesterday.*
→ 피터는 어제 산 **책**을 읽었다.
Peter read a book which he bought yesterday.

1. **버스**가 고장났다. 피터가 버스를 탔다.

→ _____ **버스**가 고장났다.

2. 나는 **동생**이 있다. 동생은 고등학교에 다닌다.

→ 나는 _____ **동생**이 있다.

3. **할머니**는 영국에 사신다. 할머니께 편지를 보냈다.

→ _____ **할머니**는 영국에 사신다.

4. **친구**가 전화를 했다. 친구는 미국에 살고 있다.

→ _____ 친구가 전화를 했다.

5. **영희**는 오늘 졸업한다. 내가 영희에게 꽃을 주었다.

→ _____ **영희**는 오늘 졸업한다.

6. **집**의 정원이 넓다. 김 선생님이 집을 샀다.

→ _____ **집**의 정원이 넓다.

7. **김인식 씨**는 사장이다. 김인식의 회사가 컴퓨터를 수출한다.
export

→ _____ **김인식 씨**는 사장이다.

8. **불고기**가 아주 맛이 있었다. 어제 불고기를 먹었다.

→ _____ **불고기**가 아주 맛이 있었다.

9. **서울식당**은 시내에 있다. 작년에 서울식당에서 일했다.

→ _____ **서울식당**은 시내에 있다.

10. **학생**은 한국에서 왔다. 내일 학생에게 내 차를 빌려준다.
lend

→ _____ **학생**은 한국에서 왔다.

11. **영희**는 행복하다. 영희의 소망이 이루어졌다.
wish were fulfilled

→ _____ **영희**는 행복하다.

12. **바다**는 남쪽에 있다. 바다에서 서핑(surfing)을 한다.
sea, ocean

→ _____ **바다**는 남쪽에 있다.

13. **어머니**는 아주 바쁘시다. 어머니는 의사이시다.

→ _____ **어머니**는 아주 바쁘시다.

14. **영희**는 파티(party)를 취소했다. 영희의 생각이 바뀌었다.

취소하다 to cancel 바뀌다 to be changed

→ _____ **영희**는 파티(party)를 취소했다.

15. **사촌**은 시드니에 산다. 사촌을 좋아한다.

cousin

→ _____ **사촌**은 시드니에 산다.

16. **도서관**은 새 건물이다. 매일 도서관에서 숙제를 한다.

→ _____ **도서관**은 새 건물이다.

17. **날씨**가 갑자기 추워졌다. 날씨가 따뜻하다.

→ _____ **날씨**가 갑자기 추워졌다.

18. 친구는 지금 일본에 있다. 피터가 친구에게 편지를 보냈다.

→ _____ **친구**는 지금 일본에 있다.

19. **대학교**는 시드니에 있다. 동생이 내년에 대학교에서 디자인(Design)을 공부한다.

→ _____ **대학교**는 시드니에 있다.

20. **피터**는 숙제를 못 했다. 피터의 컴퓨터가 고장났다.

고장나다 to be broken

→ _____ **피터**는 숙제를 못 했다.

Appendix II: Grammaticality Judgment Task

Read the following sentences and if the underlined relativized verb is correct, tick in the box and if it is wrong, mark 'x' in the box and give the correct form at the end of the sentence. Below are some examples with the English translation.

e.g. 1. ☐v 한국에서 온 영수는 대학생이다. _____
Youngsoo who came from Korea is a university student.

2. ☐x 피터는 어제 사는 책을 읽었다. 산
Peter read a book which he bought yesterday.

☐ 1. 작년에 유럽(Europe)을 같이 여행 다니는 친구가 호주에 왔다. _____

☐ 2. 요즈음 내가 친구를 매일 만나는 곳은 도서관이다. _____

☐ 3. 나는 지난 주에 읽는 책을 또 읽었다. _____

☐ 4. 그의 어머니가 중국사람인 피터는 어머니를 닮지 않았다. _____
닮다 to look like

☐ 5. 여기가 10년전 내가 다녔던 학교이다. _____

☐ 6. 내가 어제 코알라 곰 (Koala Bear)을 주는 학생은 다음주에 한국에 돌아간다.
_____

☐ 7. 어제까지 따뜻한 날씨가 갑자기 추워졌다. _____
suddenly

☐ 8. 어제 우리가 파티에서 먹는 음식은 모두 어머니가 준비하셨다. _____

☐ 9. 내일 부산에 갈 친구는 호주 사람이다. _____

☐ 10. 전에 내가 일하던 식당에서 불이 났다. _____
had a fire

☐ 11. 어제 내가 차를 빌려주는 학생은 서울에서 왔다. _____
to lend

☐ 12. 어릴 때 내가 새 옷을 빌려 입던 동생은 미국에 갔다. _____

When I was young　　to borrow and wear

☐ 13. 전에 내가 사는 동네에는 한국 사람들이 많이 살고 있었다. _____

suburb

☐ 14. 영수가 꽃을 보낸 사람은 앤이다. _____

보내다 to send

☐ 15. 나는 오늘 백화점에서 오래 전부터 사고 싶었던 구두를 샀다. _____

☐ 16. 그들의 이름이 아직 안 불리는 학생들은 모두 화가 났다. _____

불리다 to be called　　화가 나다 to get angry

☐ 17. 매년 학교에서 장학금을 주는 학생은 세 명이다. _____

every year　　scholarship

☐ 18. 좋아하지 않은 전공을 계속할 필요가 없다. _____

계속하다 to continue　필요 need

☐ 19. 저기 보이는 건물이 이번에 새로 지은 건물이다. _____

☐ 20. 지난 방학 동안에 제일 날씬해지는 사람은 앤이다. _____

날씬하다 to be slim

☐ 21. 그의 여행 계획이 취소되는 영수는 실망했다. _____

취소되다 to be cancelled　　dissappointed

☐ 22. 내일 친구들이 들으면 놀랄 뉴스가 있다. _____

놀라다 to be surprised

☐ 23. 어머니가 어제 돈을 보내드린 할머니는 영국에 사신다. _____

보내드리다 to send

☐ 24. 자신의 소원이 이루어진 영수는 행복했다. _____

own　　wish　이루어지다 to be fulfilled　　행복하다 to be happy

☐ 25. 내가 내일 찾아갈 회사는 선생님이 소개해 주셨다. _____

찾아가다 to visit

Appendix III Completion task

Fill a blank with an appropriate form using the relativizer, 는, (으)ㄴ, (으)ㄹ, 던 or 았,었,였던 as the examples given below.

e.g. 1. 한국에서 <u>온</u> 영수는 대학생이다.
오다
Youngsoo who came from Korea is a university student.

2. 피터는 어제 <u>산</u> 책을 읽었다.
사다
Peter read a book which he bought yesterday.

1. 은행 뒤에 _____ 건물이 우체국이다.
있다 bldg

2. 주말마다 _____ 할머니 댁은 시내에서 가깝다.
가다

3. 어제 _____ 한국 음식을 또 먹고 싶다.
먹다

4. 회사에서 그의 능력을 _____ 이 부장은 사장이 되었다.
ability 인정받다 became
to be recognized

5. 다음 여름 방학에 한국에 _____ 학생은 피터이다.
가다

6. 피터(Peter)가 지금 _____ 대학교는 서울에 있다.
공부하다

7. 이 가방이 어제 내가 _____ 가방이다.
찾다

8. 내가 2년 전에 _____ 호텔은 없어졌다.
머물다 dissapeared
stay

9. 나는 날씨가 _____ 나라가 좋다.
좋다 country

10. 도서관에서 지난 주에 내가 이메일(email)을 _____ 한국학생을 만났다.
보내다

11. 다음 학기에 내가 _____ 과목은 인터넷(Internet)이다.
semester 공부하다

12. 아까 내가 전화를 _____ 친구는 홍콩에서 왔다.
하다

13. 그의 아버지가 의사 _____ 제임스(James)는 약사가 되었다.
이다 pharmacist

14. 오늘 내가 신청서를 _____ 회사는 한국회사이다.
application 보내다
to send

15. 요즈음 중국에서 _____ 사람들은 돈이 많다.
오다

16. 그의 명성이 잘 _____ 김 교수는 하버드 대학교에서 가르친다.
reputation 알려지다
to be known

17. 전에 아버지가 _____ 회사는 삼성빌딩 15층에 있다.
다니시다

18. 내가 _____ 비행기는 아직 오지 않았다.
타다

19. 앤이 어제 생일 선물을 _____ 여동생은 미국에서 공부하고 있다.
부쳐주다
to send

20. 드디어 자신의 꿈이 _____ 영수는 너무나 기뻤다.
at last own dream 이루어지다 pleased
to be realized

학년 (year)	학년
모국어(First language)	

Appendix IV Korean textbooks and grammar books

1. *Hankwuke 'Korean', Book 1, 2, 3 & 4*
   1991, The Ethnic and Cultural Research Institute, Korea University
   Seoul, Korea

2. *Korean through English, Book 1, 2 & 3*
   1992, The Language Research Institute of Seoul National University
   Hollym Corporation, Seoul, Korea

3. *Hankwuke 'Korean', Book 1& 2*
   1993, Language Research Institute, Seoul National University
   Seoul, Korea

4. *Learning Korean: New Directions, Book 1 & 2*
   1994, Buzo, A & Shin, G.H.
   National Korean Studies Centre
   Melbourne, Australia

5. *Hankwuke "Korean', Book 1, 2, 3, 4, 5,& 6*
   1996, Yonsei University Press, Yonsei University
   Seoul, Korea

6. *Korean for Communicatio, Stage 1*
   1996, Shin, K.S.
   Paradigm Books, Curtin University
   Perth, Australia

7. *Korean grammar for foreigners*
   1997, Ihm, H.B., K.P. Hong and S.I. Chang
   Yonsei University Press, Yonsei University
   Seoul, Korea

8. *Dictionary of Korean grammar (as a foreign language)*
   1999, Payk, B.J.
   Yonsei University Press, Yonsei University
   Seoul, Korea

9. *Pathfinder in Korea, Book 1, 2 & 3*
   1999, Ewha Womans University Press
   Ewha Womans University
   Seoul, Korea

10. *Navigating Korean Book 1*
    2002, Kyunghee University Press and the Institute of International Education
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