



Development of Nominalizers in Some East Asian Languages

SHIN Mi-kyong

A Thesis Submitted in Partial Fulfillment

of the Requirements for the degree of

Master of Philosophy

in

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Development of Nounphrases in
Some East Asian Languages

WILLIAM S. BROWN

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Abstract of thesis entitled

Development of Nominalizers in Some East Asian Languages

Submitted by SHIN Mi Kyong

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In some East Asian languages that have pre-nominal modification structures, such as Cantonese, Mandarin, Japanese, and Korean, modifying phrases are commonly used without the head nouns. Among these languages, Korean stands out from Cantonese, Mandarin and Japanese in that while the latter three use only one morpheme to share both linking and pronominalizing functions, i.e. *ge* in Cantonese, *de* in Mandarin, and *no* in Japanese, Korean has *-eui geot* and *-n geot*, where *-eui* functions as a genitive or associative marker, *-n* as a relativizer, and *-n + geot* functions similarly to English indefinite pronoun *one*. In this thesis, I examine the dual roles of Cantonese *ge*, Mandarin *de*, and Japanese *no* as both “linker” and “pronominal” in pre-nominal modification constructions where the head noun is elided. The account proposed also captures the facts for Korean, where two distinct morphemes [*-eui/-n*] + and *geot* are recruited to express the linker and the pronominal roles.

Previous works hinge on this matter but thorough comparison and analysis has yet to appear. I hypothesize that the various functions of these morphemes are likely to have evolved from various types of determiners, i.e. the properties of a determiner can be developed into a linking type morpheme, and can also be developed into a nominalizing type with definiteness. Retaining the semantics of determiners, these morphemes have further developed into many different functions, including Cleft and Stance marking forms.

Some studies from a grammaticalization perspective (e.g. Horie 1998, and Yap et al. 2004) suggest that the differences of the four East Asian nominalizers could be analyzed through ontological (semantic) development (i.e. pronominal → event → proposition). I agree with this account in that all these East Asian nominalizers, i.e. *ge* in Cantonese, *de* in Mandarin, and *no* in Japanese develop their Genitive/Associative pronominal usages into Sentential pronominals, before they blossom into Cleft or Stance. Sentential pronominals in Japanese and Korean develop even further to be used as Complementizers or empty nouns in internally-headed relative clauses (known as IHRCs). I claim that word order differences block the development of Mandarin *de* and Cantonese *ge* into complementizers along the lines of Japanese *no* and Korean *-n geot*.

若干東亞語言中名詞化語素的發展

申美京

香港中文大學·現代語言及文化系

論文撮要

在若干東亞語言裡，如韓語、廣東話、普通話及日語，受收飾的名詞一般即使被省略亦無礙。在上述語言之中，韓語有著跟廣東話、普通話及日語不同的特徵。在後三種語言裡，代詞連接詞和指代功能都是由同一個語素表達，廣東話是 *ge*，普通話是 *de*，日語是 *no*。而韓語則有 *-eui/-n* 和 *+geot*。在這裏 *-eui* 是屬格標記 (genitive marker)，*-n* 是關聯詞 (associative or relativizer)，而 *geot* 則有著類似英語不定指代名詞 (indefinite pronoun) *one* 的特徵。本論文剖析廣東話 *ge*、普通話 *de* 及日語 *no* 的雙重功能。它們在中心語被省略的名詞前修飾語中，擔當著連接語素 (linking morpheme) 及代詞語素 (pronominal) 的角式。本論文所題出的方案更可解釋為何韓語用兩個不同的語素，來分別擔當這兩個角式。

以往的研究雖有提及此現象，但沒有深入的對比分析。本文設想這些名詞化語素都是從帶有定指意義的語素發展而成。它們保留了這些語素的語義，並引伸到很多不同的功能，包括分裂句 (cleft) 及語氣詞 (stance)。

另一方面，語化法學者提出用語義單向性 (即 指代→事件→命題) 來分析這些東亞語言名詞化語素的異同 (Horie 1998, and Yap et al. 2004)。他們認為這些名詞化語素都是根據單一趨向發展而成的，屬格語素 (genitive) 要先演變成屬格指代詞 (genitive/associative pronominal)，再發展成句子指代語素 (sentential pronominal)，然後才擴展到分裂句及語氣詞。其中日語和韓語的句子指代語素則再發展成中心語內置關聯短句 (internally-headed relative clauses) 內的標補語 (complementizer) 或空置名詞 (empty noun)。本論文更推斷廣東話和普通話之所以未能夠有日語和韓語的規律是由於其語序之不同所引致的。

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Chapter 1

Introduction

This thesis investigates Nominalizing systems in some East Asian languages that share “pre-nominal” modifying structures: two Chinese dialects (Cantonese and Mandarin)¹, Japanese and Korean. Cantonese and Mandarin Chinese are isolating languages in the Sinitic group, and both are largely regarded to have SVO word order. Japanese and Korean are agglutinative languages with SOV word order, whose genetic relationships are still unclear, although both are greatly influenced by Sinitic languages, particularly lexically. In pre-nominal modifying structures, it is often necessary to mark the relationship between the modifying phrase and the modified head noun following it. Linking morphemes act as such markers in some East Asian languages. These morphemes are observed to have developed their usages as pronominals, nominalizers, and stance markers (Yap, Matthews, and Horie (2004)). This thesis assumes that the nominalizers originally have these dual natures: firstly, lexical property such as pronominals, and secondly, functional property as linkers. I also attempt to explain how they lead to similar functional development across these four languages.

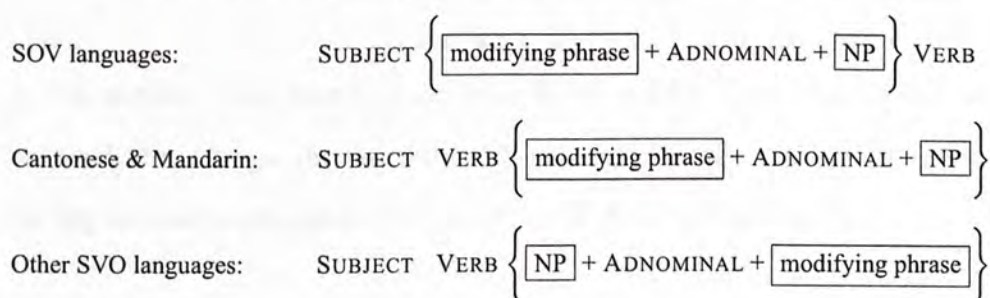
¹This is rather a socio-linguistic matter. For more detail, see Bruche-Schulz (1997) and Li (1996), among others. Throughout the thesis I will not address the controversy of whether they are languages or dialects.

1.1 Nominalizers in some East Asian languages

In many languages, the head noun in [Modifying phrase + Noun] structure is optional as long as the modifying phrase is itself a pronominal, or it is attached with a linking element. In several East Asian languages that allow pre-nominal modification, Korean stands out from Cantonese, Mandarin and Japanese in that while the latter three use only one morpheme to share both linking and pronominal functions, i.e. *ge* in Cantonese, *de* in Mandarin, and *no* in Japanese, Korean has [-*eui geot*] or [-*n geot*], where *-eui* functions as a genitive marker, *-n* an associative or a relativizer, and *geot* functions similarly to English *one*.

The term “adnominal” is popularly used in Japanese and Korean, as linkers for their productive pre-nominal modification structures. Both languages strictly follow SOV word order. Pre-nominal modifying expressions, particularly long and complicated ones, are typically marked with a morpheme, as shown in Figure 1.1.²

Figure 1.1: Linking morphemes between the modifier and the modified



We notice that Cantonese and Mandarin Chinese do not follow the strict SVO order. Rather, they show the SOV property in Noun-Modification (N-Mod) structures.

The tricky part of these morphemes is that in Japanese, Cantonese and Mandarin Chinese, they are not necessarily followed by the head noun. When headless, it appears

²For expository convenience, only the OBJECT is expanded in “Modifying phrase + NP” format, though the SUBJECT can be of the same structure as well.

to function as a pronoun. This is highlighted in Figure 1.2.

Figure 1.2: Prominal usages of *ge*, *de*, *no*, [-*eui*/-*n*] *geot*,

SOV languages:	SUBJECT	{	modifying phrase	+	ADNOMINAL	+	ϕ	}	VERB
Cantonese & Mandarin:	SUBJECT	VERB	{	modifying phrase	+	ADNOMINAL	+	ϕ	}
Other SVO languages:	SUBJECT	VERB	{	ϕ	+	ADNOMINAL	+	modifying phrase	}

Korean differs from Japanese, in that the head noun should always follow the linking morpheme. The discrepancy they show has to be further discussed in subsequent chapters.

1.2 Forms and functions of four East Asian nominalizers

In this section, I will introduce the basic forms and functions of the four East Asian nominalizers, i.e. *ge*, *de*, *no*, and (-*eui*) *geot* and -*n* *geot*.³ They can be viewed as having two major roles in syntax: as a linker, and as a pronominal.

1.2.1 Linker

Contrary to the traditional understanding and analysis about Relative Clauses (henceforth RCs) structure, all four East Asian languages show instances that cannot be adequately explained by the traditional analysis for English RCs. In English, only simple

³The Korean '-*eui*' is bracketed to mean it is optional. In modern Korean usages, dropping this genitive marker is more natural.

possessive and adjective phrases, and gerundive-type RCs can pre-modify the head noun as shown in (1).

- (1) a. *John's car*
 b. *new piano*
 c. *the standing man*

When these modifying phrases or clauses get longer, they need to be positioned after the head noun, as illustrated in (2) below.

- (2) a. i. * *the new* [_{PP} *in the frame*] *photo*
 ii. *the new photo* [_{PP} *in the frame*]
 b. i. * *the* [_{PP} *over the hill*] *house*
 ii. *the house* [_{PP} *over the hill*]
 c. i. * *the* [_{RC} *standing by the car*] *man*
 ii. *the man* [_{RC} *(who is) standing by the car*]

In the four East Asian languages that form the focus of the present thesis, not only possessive and adjective phrases, but RCs can also pre-modify the head noun. Consider the following Cantonese examples:⁴

- (3) a. *ngóh lóusai ge chē*
 I boss LNK car
 'my boss's car(s)'
 b. [_{PP} *hái séunggá léuihmihn*] *fūk sán ge séong*
 [at frame inside] CL new LNK photo
 'the new photo in the frame'

⁴For Cantonese, the Yale romanization is adopted.

- c. [_{RC} *kéih hái ga chē jāk bīn*] *gó go nàahmyán*
 [stand at CL car near] DEM CL man
 ‘the man standing by the car’

The (4) illustrates the pre-nominal modifying structures with an associative phrases, in all four East Asian languages:

- (4) a. [_{PP} *hái máahloh*] *ge* *chāaiyàhn* (Cantonese)
 [at road] LNK policeman
- b. [_{PP} *zài mǎlù-shàng*] *de* *jǐng cá* (Mandarin)
 [at road-on] LNK policeman
- c. [_{PP/NP} *michi manaka*] *no* *keisachu* (Japanese)
 [road center] LNK policeman
- d. [_{PP/NP} *toro wi*] *-eui* *kyeongchal* (Korean)
 [road top] -LNK policeman
 ‘policeman on the road’

Here, we observe that the nominalizing morphemes (*ge*, *de*, *no*, and *-eui*) of these East Asian languages function as Linkers between the associative phrase (PP/NP) and the head noun⁵, with similar meaning to English *of*. This represents one of the major characteristics these four East Asian languages share: the pre-nominal modifying expressions in these languages are always marked with linking morphemes; except when they mark inalienable or kinship relationship with the head noun, as shown below⁶:

- (5) a. *hohksāang (ge) fuhmóuh* (Cantonese)
 student (LNK) parents
- b. *xúesheng (de) fùmǒu* (Mandarin)
 student (LNK) parents

⁵Japanese and Korean differ from Cantonese and Mandarin, in that we do not see PPs clearly but they rather look like NPs.

⁶For Korean, the omission of possessive marker is now more common.

- c. *gakusei (no) ryoushin* (Japanese)
student (LNK) parents
- d. *haksaeng(-eui) poomo* (Korean)
student(-LNK) parents
'student's parents'

In the case of longer phrases, such as Adjective phrases, Associative Phrases, and RCs, the “linking” strategies in these languages appear to be different. Cantonese *ge* and Mandarin *de* as linkers for these longer phrases do not change their forms as if they are exactly the same morphemes as for marking genitives and associatives. Meanwhile, we see a new morpheme *-n* as a linker in Korean, and Japanese looks like its linking morpheme is lost, or marked with ϕ morpheme. Consider the crosslinguistic contrasts in (6) below.

- (6) a. *hóngoi ge móu* (Cantonese)
cute LNK hat
- b. *kě'ài de màozi* (Mandarin)
cute LNK hat
- c. *kawai boshi* (Japanese)
cute hat
- d. *kwiyeowoo-n moja* (Korean)
cute-LNK hat
'(a) cute hat'

Notice that Japanese appears to be the only language among the four East Asian languages that does not recruit the linking morpheme in Adjective phrase with a head noun and headed RCs. We will deal with this discrepancy in Chapter 5, as one of the instances of syntactic ambiguity among the four East Asian languages.

However, in the structure with an adjective noun such as (7) below, we note the recruitment of the linking morpheme *na* in Japanese.

- (7) a. *chūngmihng ge hohksāang* (Cantonese)
 smart LNK student
- b. *chóngmǐng de xúesheng* (Mandarin)
 smart LNK student
- c. *soumei-na gakusei* (Japanese)
 smart-ADJ student
- d. *chongmyeongha-n haksaeng* (Korean)
 smart-LNK student
 ‘(a) smart student’

The exception in the case of Japanese, or its realization in covert form or *-na*⁷ in (6c) and (7c), respectively will be dealt with in Chapter 3, where the syntactic and semantic differences of these four East Asian languages are discussed.

1.2.2 Pronominalization

In this thesis, I will also discuss another major function of Adnominals in these East Asian languages. Consider the uses of Japanese *no* in (8) below, where genitive *no* assumes a genitive pronominal function when the head noun is elided, i.e. when the construction becomes headless.

- (8) a. *Taroo no hon*
 Taroo LNK book
 ‘Taroo’s book’
- b. i. *Taroo no φ*
- ii. ? *Taroo no no*⁸
 ‘Taroo’s (one)’

⁷This morpheme is glossed as “ADJ.” This refers to the marker for “Adjectival Noun,” which is different from the other adjectival markers in the other three East Asian languages.

⁸This type exists in some Japanese dialects, which will be discussed in §3.1.

Nominalization is more aptly described as a syntactic recategorization from predicate to noun, while pronominalization brings about anaphoric relationship, and it often refers to the possessee in possession relationship, as in (8b-ii).

The following figure diagrams the basic forms and functions that the four East Asian nominalizers share:

Figure 1.3: Two basic roles of the Nominalizers in some East Asian languages

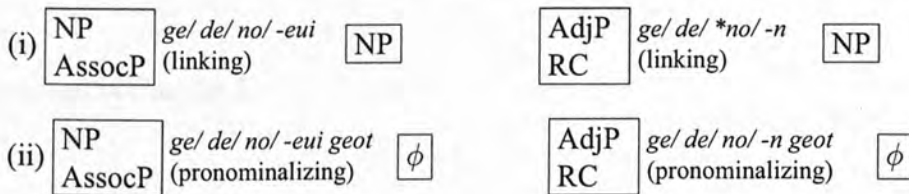


Figure 1.3 shows that these East Asian languages use overt forms of Nominalizers, whether they are used as Linkers as in (i), or as Pronominals as in (ii). There are some cases that do not fit into the above schemes thoroughly. For instance, Japanese *no* does not appear as a linker in relative clause (RC) construction in (i); rather it appears only as a pronominal. That is, Japanese disallows headed RCs with *no*, but it appears instead in headless RCs. The most prominent difference among these nominalizers is that Korean *-eui* and *-n* do not have pronominal functions. Table 1.1 summarizes their syntactic characteristics.⁹

As shown in the Table 1.1 above, Japanese *no* and Korean *-n geot* seem to have extended to complementizer (or, sentential nominalizer) function, while Cantonese *ge* and Mandarin *de* do not show clear functions as a complementizer or a Sentential Pronominal. In this thesis I will show that both the complementizer functions appearing with Japanese and Korean, and stance marking functions shown in all the four East Asian languages have evolved via the pronominalizing function (see also Yap et al. 2004). Many other puzzles or discrepancies among these nominalizers will be

⁹This table was revised based on comments from H.S. Lee. I acknowledge his invaluable comment here.

Table 1.1: Multi-functions of four East Asian nominalizers

	Poss marker	Poss/Assoc Pronominal	Adj/RC	Sentential Pronominal	Free RC	Cleft	Comp	Stance
Cantonese <i>ge</i>	✓	✓	✓	✓	✓	✓	x	✓
Mandarin <i>de</i>	✓	✓	✓	✓	✓	✓	x	✓
Japanese <i>no</i>	✓	✓	x	✓	<i>koto</i>	✓	✓	✓
Korean <i>-n</i>	<i>(-eui)</i>	<i>(-eui) geot</i>	✓	<i>-n geot</i>	<i>-n geot</i>	<i>-n geot</i>	<i>-n geot</i>	<i>-n geot</i>

discussed in Chapter 5.

1.3 Grammaticalization of East Asian nominalizers

This thesis also provides a grammaticalization perspective to the development of the various constructions with Cantonese *ge*, Mandarin *de*, Japanese *no*, and Korean *(-eui) geot* and *-n geot*.

A number of studies have attempted a unified analysis of nominalizers in East Asian languages. As Simpson and Wu (2001) point out, there is tremendous similarity in the distribution of Mandarin Chinese *de*, Japanese *no*, and Korean *geot*. Yap et al. (2004) further discussed Malay *(em)punya* to provide support for unidirectionality in the grammaticalization of pronominal markers into stance markers. A more detailed discussion will be provided in §5.3.1.

I will show that the four East Asian nominalizers studied in this thesis, which have either a locative or nominal source, have these two functions that have been developed with determiner meanings.

1.4 Research questions and organization of the thesis

With the brief introductory sections above, we have learned that the four East Asian nominalizers have at least two functions – linking and pronominalizing functions. I assume that such two different properties of these nominalizers result from their pre-nominal modification structures. I believe their pre-nominal modification structures, which set them apart from other languages such as Indo-European languages, can answer some provoking questions:

- Why do these East Asian nominalizers show a similar range of functions?
- Do their functional categories (such as possessive marker and relativizer) and their nominal categories (such as pronominal) share overlapping properties?
- How were these two properties realized as one morpheme (except in Korean)?

While the majority of current works aim at identifying the reason why the four East Asian nominalizers behave similarly, this thesis will further describe and analyze *how* and *why* these nominalizers do not totally match each other. Cantonese *ge*, Mandarin *de* and Japanese *no* show support for the unidirectionality hypothesis in the theory of grammaticalization, so an interesting question is whether Korean [-*eui/-n*] *geot* behaves the same as well.

In this thesis I also attempt to analyze how such incompatibility came about. I hypothesize that these nominalizing morphemes originated from Determiner, and further developed to cover many different functions, including Linkers, Pronominals, and Cleft/stance markers.

My hypothesis proposes two possible reasons for their differences; firstly, all these four East Asian languages show variations in several types of nominalization, in the

ways they recruit the linking morphemes in pre-nominal modification structures. Secondly, the nominalizers in these languages have developed in their own ways, along with the ontological unidirectionality in their pathways.

The organization of this thesis is as follows: Chapter 2 discusses the development of Korean nominalizing systems, namely the Linking morphemes *-eui/-n* and Pronominal *geot*, which I claim for the comparability with some other East Asian nominalizers such as Japanese *no*, Mandarin *de*, and Cantonese *ge*. In Chapter 3, Korean *-n geot* will be compared with Japanese *no* because of their strong structural similarity, and the comparison with Mandarin *de* and Cantonese *ge* will be dealt with in Chapter 4. In Chapter 5, we will discuss the incompatibilities among these East Asian nominalizers and attempt to have some solutions by having an alternative account. We consolidate our findings and claims in Chapter 6.

1.5 Abbreviation

The abbreviations adopted in this thesis are as follows:

ACC:	Accusative	NMZ:	Nominalizer
ADN:	Adnominal	NOM:	Nominative
COMP:	Complementizer	NPast:	Non-past tense
COP:	Copula	Past:	Past tense
DEC:	Declarative	PL:	Plural
DEM:	Demonstrative	Pres:	Present tense
FUT:	Future tense	PROG:	Progressive aspect
GEN:	Genitive	REL:	Relativizer
HON:	Honorific	TOP:	Topic
LNK:	Linker		

Chapter 2

Development of Korean nominalizing system

Unlike the other three East Asian nominalizers, Korean has two separate morphemes, i.e. the linking part *-eui/-n* and the pronominal part *geot*. Meanwhile, Japanese *no*, Cantonese *ge*, and Mandarin *de* appear to have these two functions in one form. Due to such uniqueness, Korean nominalizing system will be discussed earlier than other East Asian nominalizers. First, we examine these two distinct forms shown in Korean nominalizers in §2.1. In §2.2, we will seek for a logical (or possible) development of the nominalizer into various functions. Some diachronic perspectives will be added in the final section for more dynamic accounts on Korean nominalizer (*-eui*) *geot* and *-n* *geot*.

2.1 Two distinct properties of Korean nominalizers

We need to pay attention that when we form a pronominal in contemporary Korean, we always need two different morphemes acting as a chunk (either *-eui geot* or *-n geot*),

which is different from Cantonese, Mandarin, and Japanese nominalizers mentioned above. In this section, I will describe this construction as a whole, i.e. either *-eui geot* or *-n geot*, should be viewed as a whole nominalizer, which is compared to Japanese *no*, Cantonese *ge*, and Mandarin *de*.

2.1.1 Korean Linking morphemes *-n*, *-neun*, *-l*

Korean is well-known for its rich system of adnominal suffixes, as well as overt case markers. When a head noun is modified by a clause or a verbal phrase, it cannot be just attached to the head noun, but must always be accompanied with a linking morpheme, phonologically realized as either *-n*, *neun*, or *-l*, which holds temporal reading to the clause – past, present, and future, respectively.¹ These three morphemes are called adnominal suffixes by Korean linguists. The basic function of Korean adnominal morphemes is to serve a “linkage” between a modifying phrase and a head noun. Modifying forms range from a simple adjective to a relative clause. It should be noted that the Korean linking morphemes are not used in exactly the same way as the “rentaiki (adnominal)” verb endings in Japanese as in (9) or endings of adjectival verbs as in (10):²

- (9) a. *i-ku* ‘to go’
 b. *a-u* ‘to meet’
 c. *su-ru* ‘to know’

- (10) a. *kawai-i* ‘(to be) cute’
 b. *tanoshi-i* ‘(to be) fun’
 c. *yuru-i* ‘(to be) slow’

¹There is one more form, i.e. *-teon*, which adds a retrospective reading to the verb.

²A diachronic perspective of the Japanese adnominal system will be discussed in the next chapter.

Unlike the Japanese case, relativization in Korean is always indicated by an explicit marker. As in (11), one of the three types of suffixes should be attached to embedded predicates.

- (11) a. *(nae-ga) sa-n ot*
 (I-NOM) buy-LNK:Past clothes
 ‘the clothes that (I) bought’
- b. *(nae-ga) sa-neun ot*
 (I-NOM) buy-LNK:NPast clothes
 ‘the clothes that (I) buy (usually)’
- c. *(nae-ga) sa-l ot*
 (I-NOM) buy-LNK:future clothes
 ‘the clothes that (I) will buy/ (the) clothes to buy’

When compared to the other three East Asian languages, the Korean nominalizing system is distinct, in that it involves tense realization. As shown in (11), the three Korean Linkers, *-n*, *-neun*, and *-l* add tense reading of “past,” “present (or non-past),” and “future,” especially in RC-type expressions.

Lee (1993:77) claims that these Korean attributives mark the realis/irrealis distinction. According to him, *-n* is defined as the “realis attributive” marker, and *-l* is the “irrealis attributive” marker. It is generally assumed that Korean RC constructions may have arisen by [RC][NP] apposition, with the Linking morphemes *-n*, *-neun*, and *-l* first marking tense/aspect, then later interpreted as relativizer as well. The Korean realis/irrealis will be discussed in detail in §5.4.

2.1.2 “Bound noun” *geot*

There have been studies searching for the origin of *geot*, which retains more lexical sense than *-n*. The major claims about this bound noun *geot* by historical linguists are

related with a noun or a verb meaning “break.” Ramstedt in particular claims that *geot* originates from “piece” or “to cut” ((1937), cited in Lee, 1976).

Similarly, according to contemporary Korean linguists, the status of *geot* in Korean has been generally defined as a “bound noun” or a “non-free lexical noun.” In a comparative study of East Asian nominalizers, they view the status of *geot* as a type of noun/ N^0 (broadly meaning “thing”). Since it is of “bound” form, the status of *geot* is less lexical but rather grammatical.

As shown in (12), *geot* could be specified by a demonstrative to yield a general noun such as ‘that (thing)’. As highlighted in (13), it cannot however stand independently as a free morpheme.³

- (12) *keu geos-i*
that GEOT-NOM
‘that (thing) is’ (from Simpson & Wu 2001)

- (13) **geos-i tah yeogi isseo-yo*
GEOT-NOM all here exist-HON
‘All the things are here’
(lit.) ‘The things are all here’ (ibid.)

So far, we have seen that the Korean Linking morphemes always occurs with an overt head noun or with bound noun *geot*, which could be interpreted as a general noun or an all-purpose pronominal. Knowing this fact is essential, especially for comparing with the other East Asian languages, as their head nouns do not have to be overt (we will elaborate on this in Chapters 3 and 4).

³When *geot* is followed by a vowel, we observe /s/ instead of /t/ in the coda position.

E.g. *geot + i* (Nom) → *geosi* [kəʃi], or *geot + eul* (Acc) → *keosl* [kəsul]

2.2 Degrees of nominalization

Korean has pre-nominal modification structure. This means the head noun is put in the final position of the whole modification phrase (MOD + NP). When bound noun *geot* is used, it serves a pronominal function. However, when the modifier is a clause, the complex *-n geot* construction attains the status of sentential nominalizer.⁴

2.2.1 Linker to Pronominal

Another important aspect we deal with in this thesis is the relationship between non-finiteness and nominalization. Consider first the English expressions in (14):

- (14) a. *The ducks are swimming*
 b. i. *the ducks which are swimming*
 ii. *the swimming ducks*
 c. *the swimming thing*
 d. *Swimming is fun*

(14a) is a finite and independent clause, where the predicate *are swimming* is inflected for tense and *-ing* conveys aspectual value (i.e. Progressive). When such independent clauses change their status into a modifier, they become dependent to the modified head noun as in (14b-i) and (14b-ii). At first glance they appear to have the same meaning. However, the former still has a clausal status and its finiteness is retained, while the latter is no longer visible as a clause and is deprived of finiteness.

⁴Sentential nominalizing *geot* has actually been in the center of the research on grammaticalization of the Korean language. It has been analyzed as either a Complementizer (e.g. Horie (2000), Kim (1987), and Kim (1997)) or a Sentential Nominalizer (e.g. Simpson & Wu 1998) in a longer phrase, and either a bound noun or a pronominalizer in a shorter phrase.

Thus, in (14b-ii), we see an association between non-finiteness and the *-ing* form functioning as a modifying expression.

There is a distinct difference in statuses of *swimming* in its modifying function in (14b-ii) and (14c) from that of its gerundive use in (14d). Note the important semantic changes between these constructions: *swimming* in (14b-ii) modifies an object; in (14c), it could modify either an object or an event (in informal usage); finally in (14d) when used pronominally in the absence of the head noun ‘thing’, *swimming* could refer to the action or event itself. I suggest that the transition here follows the steps “a → b”, as shown in (15):

- (15) a. [NP [Adj [V *swim*] + *-ing*] + N]
 ↓
 b. [NP [Adj [V *swim*] + *-ing*] + ϕ]

Unlike English, Korean strongly disprefers headless constructions, and thus shows the overt pronominal form *geot* even for gerundive form as in (16b).

- (16) a. [NP [Adj [V *he.eomchi*] + *-neun*] + N]]
 b. [NP [Adj [V *he.eomchi*] + *-neun*] + *geot*]

Let us now elaborate with examples from Korean.

- (17) a. *Ori-deul-eun he.eomchi-go.iss-da*
 duck-PL-TOP swim-PROG-DEC
 ‘The ducks are swimming’
 b. i. *he.eomchi-go.iss-neun ori-deul*
 swim-PROG-ADN:Pres duck-PL
 ‘the ducks which are swimming’
 ii. *he.eomchi-neu-n ori-deul*
 swim-ADN:Pres duck-PL

‘swimming ducks’

- c. *he.eomchi-neu-n geot*
 swim-ADN:Pres thing
 ‘the swimming thing’/ ‘swimming’
 (Lit.) ‘the thing that is swimming’
- d. *He.eomchi-neu-n geos-eun jaemi.iss-da*
 swim-ADN:Pres GEOT-TOP fun-DEC
 ‘Swimming is fun’

(17) shows each clear step of Korean nominalizer from Linker/Modifier to Pronominal. At first, the noun *ori-deul* ‘ducks’ is in the subject position as in (17a). However, if we want this noun to be modified by a previous predicate, such as *he.eomchi-go.iss-da* ‘(ducks) are swimming’, as in (17b-i) and (17b-ii), we see the recruitment of the modifying morpheme *-n*. Here, the progressive aspect is still realized in (17b-i), but in (17b-ii), the aspect sense is not explicitly expressed. Without the Tense or Aspect realization, it can thus be interpreted either with its aspectual value implied, i.e. ‘the ducks which are swimming’, or with attributive meaning emphasized, i.e. ‘swimming ducks.’⁵ The tense/aspect distinction and dependency to the head noun work the same in (17c). *Geot* in (17c) can thus be interpreted as a pronominal, for an entity (‘swimming thing’), an activity (‘swimming activity’), and even an event of swimming. Finally in (17d), the meaning of *he.eomchi-neu-n geos* ‘swimming’ is only restricted to the activity or event.⁶ In this case the dependent clause is used as a nominalized clause, where it also gets the nominal status. Also note that the topic marker *-eun* highlights its nominal status.

⁵Put logically, for (17b-i), we may say $\lambda t_1 \lambda t_2 \lambda e [duck(e) \cap swim(e, t_1 \rightarrow t_2)]$. And for (17b-ii), $\lambda e [duck(e) \cap swim(e)]$. Quotation of the plural “duck” is intentionally left out for clarity.

⁶Although *-neun* is glossed as “ADN:Pres”, we actually obtain a generic reading that accompanies the gerundive form through the nominalizing form *-neun geot*. Note also that the extension of *-neun* from present tense marker to irrealis marker *-neun geot* in gerundive context is consistent with the development of imperfectives (Bybee et al. 1994).

To conclude, the complex construction of *-n geot* [Linker + Pronominal] in Korean functions as a nominalizer, and (17c) serves as a “bridge” context between pronominalizing an entity and an event.⁷

2.2.2 Pronominal to Nominalizer

As highlighted in (18) and (19), there is a close relationship between a nominal (i.e. NP) and a nominalized clause (i.e. CP), no matter whether it is in an SVO language or SOV language.

- (18) a. *I saw* [_{NP} *the ducks' swimming*]
 b. *I didn't know* [_{CP} (*that*) *ducks also swim*]
 c. [_{CP} *That ducks also swim*] *is surprising (to me)*
- (19) a. [_{NP} *Ori-deul-i he.eomchi-neun geos*]-*eul bo-ass-da*
 [duck-PL-NOM swim-ADN:Pres GEOT]-ACC see-Past-DEC
 ‘(I) saw the ducks’ swimming’
 b. [_{CP} *Ori-deul-do he.eomchi-n-da-neun geos*]-*eul*
 [duck-PL-also swim-NPast-DEC-ADN GEOT]-TOP
molla-ss-da
 not.know-Past-DEC
 ‘(I) didn’t know that ducks also swim’
 c. [_{CP} *Ori-deul-do he.eomchi-n-da-neun geos*]-*i*
 [duck-PL-also swim-NPast-DEC-ADN GEOT]-NOM
nollawo-ss-da
 surprising-Past-DEC
 ‘That ducks also swim is surprising (to me)’

As shown in (18), the sentential nominalizer *that* in English has the property of a complementizer, while in (19), Korean provides some evidence that nominalized

⁷For detailed discussion about the relationship between tense/aspect and nominalization, see Evans & Wilkins 2000.

clauses can be viewed as a CP. Note that such clauses with *-n geot* can be analyzed as a nominal structure (either NP or DP, depending on one's theoretical persuasion). For instance, as in (19a), *geot* still looks nouny because Korean does not permit [*geot* + N] structure.⁸ Hopper and Traugott (2003) noted, "complements are essentially clauses functioning as NPs." This means that when an independent clause gets nominalized and becomes dependent, the nominalized clause is treated as a nominal like an object NP in the speaker's mind.

The shift from finiteness to non-finiteness is also observed here. The event in (19a) is now reified (or nominalized) and treated as a noun; in this case an 'object' that can be held up for observation, retrospection, analysis, comment, etc. (see Hopper and Traugott 2003).

Recall that in (19) the pronominal *geot* is obligatory. Since its modification scopes the whole clause that is interpreted as an event or a proposition, *geot* is usually termed as Complementizer.⁹ I claim that this Sentential Pronominal *geot* or *-n geot* cannot always be analyzed as complementizer, since sometimes an object case marker follows it (or more precisely, follows the entire nominalized clause), as in (20). In other words, lexical *geot* 'thing' has changed to functional *geot* 'the event/ fact) that...?'.⁹

- (20) [_{CP} *harabeoji-ga choomoosi-neu-n geos*]-*eul ar-ass-da*
 [grandfather-NOM sleep:HON-NPast-LNK GEOT]-ACC know-Past-DEC
 '(I) knew that grandfather was sleeping' (Kim 1997: 392)

Even as a Complementizer, *geot* is not used alone, but the *-n geot* as a whole should be regarded as complementizer. It is also natural in Korean for the matrix verb in the above example to often be replaced by perception verbs, such as "see" and "hear":

⁸I will discuss this distinction between CP/DP in finer detail in Chapter 5.

⁹In generative linguistics a complementizer phrase is generally regarded as the locus of proposition, and it occupies the topmost position in the syntactic tree.

- (21) [_{CP} *harabeoji-ga choomoosi-neu-n geos*]-*eul po-ass-da*
 [grandfather-NOM sleep:HON-NPast-LNK GEOT]-ACC see-Past-DEC
 ‘I saw grandfather sleeping’

This nominalizer *geot* can be replaced by free noun *sashil* ‘(the) fact’. In her discussion of “the fact-S type clauses”, Sohn (1999:312) refers to structures with *geot* as a defective noun.¹⁰ Due to its co-occurrence with the Linking morpheme *-n*, and the Pronominal *geot* seems to have retained its ‘nouny’ property longer than the other nominalizers.

2.2.3 Nominalizer to Stance marker

So far, we have seen that Korean pronominal is comprised of two separate morphemes, i.e. *-eui/ -n* as linking part and *geot* as functional head noun, and this pronominal structure *-eui/ -n geot* as a chunk has further developed into a nominalizer.

As we shall see, *-n geot* has developed even further into a stance marker. Unlike the case of English, which does not have overt stance markers in the form of sentence-final particles, Korean has an overt form – namely, nominalizer *-n geot*. I claim in this thesis that pronominal *-n geot* serves as a bridge between determiner and nominalizing functions (see also Horie 1998, and Yap et al. 2004).

Let’s take a closer look at this development. (22), (23), and (24) are examples of transitions¹¹ from sentential nominalizer (complementizer) to stance.

- (22) [*Keu-ga o-n geos*]-*eun eoje-ya*
 [he-NOM come-LNK:Past GEOT]-TOP yesterday-COP+DEC

¹⁰Apart from *sashil* ‘the fact (that)’, propositions are usually followed by *sosik* ‘the news (that)’, *jeunggeo* ‘the evidence (that)’, *ganeungseong* ‘the possibility (that)’, etc.

¹¹This can be regarded as “bridge contexts” as well in Heine’s (2003) terminology.

‘It was yesterday that he came’

‘(Lit.)(The event) that he came was yesterday’

- (23) *Keu-neun eoje o-n geo-ya*
 he-TOP yesterday come-LNK:Past GEOT-COP+DEC
 ‘It was yesterday that he came/ The situation is that he came yesterday’

- (24) *Keu-neun eoje o-n geo-ya*
 he-TOP yesterday come-LNK:Past GEOT-COP+DEC
 ‘You know he came yesterday (I can assure you of that)’

In (22), the bracketed clause *keu-ga o-n geos* ‘(the event) that he came’ is the pronominalization of the event involving his coming. We can treat this structure as an RC, because *geot* here can serve as a pronominal head that refers to the time (note that *eoje* ‘yesterday’ is specified immediately after this clause). However, this structure is generally termed as “cleft,” as the main verb is copula¹² and the copular verb gives the whole nominalized clause a focused sense. Meanwhile, in (23), the whole piece of information “he came yesterday” is realized. This case can also get focused meaning by nominalizing the whole event or proposition. Here, we get a stance reading, as well. This is due to the verb-final structure of Korean. The copula verb *i* plus declarative marker *a* (realized as *ya*) always comes at the end position, and this leads to a conflation of the status of *geot* as ‘complementizer for cleft’ and ‘stance marker’. In (24) we finally obtain a fixed expression with a stance reading. I suggest that nominalizer and complementizer share this boundary area of Nominal and Clausal function, and the Korean *-n geot* can appear in either form flexibly, due to the head-final word order. Given the pro-drop tendency in Korean, (24) arguably constitutes a stance construction in which the speaker is suppressed and the assertion is subtle and suggestive.

¹²The ending ‘*ya*’ in (22), (23), and (24) is the contracted form of copula verb ‘*i*’ + a declarative marker ‘*a*,’ so it holds an assertive reading.

2.3 Competition from other nominalizers

Now let's turn to a diachronic aspect of the Korean nominalizer *-eui geot* and *-n geot*. In this section, I'll try to examine separately the linking part, i.e. *-eui* or *-n*, and the pronominal part *geot*. If we view these morphemes one by one, then there are three distinct forms, i.e. *-eui*, *-n*, and *geot*. All these morphemes have been in use since at least the 15th century.

2.3.1 Nominalizer *-(o/u)m*

There are competing forms of nominalizer or pronominalizer attested in the 15th century records, such as *Wol-in Cheongangjigok* (1449) and *Wol-in Seokbo* (1459). We find, for example, *-(o/u)m* co-occurring with *(-n) geot*. (25) is an example of the nominalized clause with *-(o/u)m*, and (26) with *-n geot*.

- (25) [Sarom-i neunghi ... chedeukhoya mar-(o)m]-i jeongbeob-iyo
 [human-NOM possibly ... sincerely speak-(LNK) NMLZ]-NOM correct-DEC
 'Speaking (of a human) sincerely is the correct way (of speaking)'
 (*Wol-in Cheongangjigok* (1449) – Lee, 1976)

- (26) [Ryeok-eun him-ini dyohi naeya pseu-neu-n geos]-i ryeok-io
 [force-TOP energy-so well produce use-Pres-LNK NMLZ]-NOM force-DEC
 'Force is energy, only when we use it well'
 (*Wol-in Seokbo* (1459) – Lee, 1976)

The most controversial issue on *-n* in the 1970s of Korean linguistics was to relate this morpheme to the verbal suffix *-o/u-*, with generally concluding that these two occur as free variations for adnominal marking, i.e. for the function as a Linker. Lee (1976) unifies the various accounts as follow: the two linking forms *-n* and *-o/u-* might

be from the same origin, but they were already serving two different functions already in the 15th century. Both of them could express some mood, but this function is found with *-n* even in the 15th century, while *-o/u-* grammaticalized more to ending forms expressing subjunctive mood. After a period of co-existence, the nominalizer *-(o/u)m* was gradually overridden by *-n geot/* or *-neun geot* in the late 16th century.

Nowadays, we still find *-(eu)m*, which developed from *-(o/u)m* used as a nominalizer. Its usage as sentential nominalizer is shown in (27a).

- (27) a. *Mary-neun* [_{CP}*John-i gil-eul geoneo-ss-eum*]-*eul al-ass-da*
 Mary-TOP [John-NOM street-ACC cross-Past-NMLZ]-ACC know-Past-DEC
 ‘Mary learned that John had crossed the street’ (**proposition**)
- b. *Mary-neun* [_{CP}*John-i gil-eul geoneo-neu-n geos*]-*eul bo-ass-da*
 Mary-TOP [John-NOM street-ACC cross-Pres-ADN NMLZ]-ACC
 see-Past-DEC
 ‘Mary learned that John had crossed the street’ (**proposition**)

As shown in (27), the nominalized construction with *-(o/u)m* can be compared with the *-n geot* construction. However, (27a) is used in formal register, and restricted to only the propositional reading, while *-n geot* construction is used with both propositional and event readings as in (28b).

- (28) a. ? *Mary-neun* [_{CP}*John-i gil-eul geoneo-(eu)m*]-*eul al-ass-da*
 Mary-TOP [John-NOM street-ACC cross-NMLZ]-ACC know-Past-DEC
 ‘Mary saw John cross the street’ (**event**)
- b. *Mary-neun* [_{CP}*John-i gil-eul geoneo-n geos*]-*eul bo-ass-da*
 Mary-TOP [John-NOM street-ACC cross-ADN:Past NMLZ]-ACC see-Past-DEC
 ‘Mary saw John cross the street’ (**event**)

This corresponds to the retention of *-(eu)m* with what Lyons (1967) refers to as third order entities, and *geot* with both second and third order entities.

2.3.2 Competition with Middle Korean **-n /dɔ/*

Lee (1976:128) discussed another possible origin of the nominalizers in Middle Korean (in the 15th century), **/dɔ/*, which is another bound noun.¹³ Until the 16th century, there was another parallel form of *-n geot*, i.e. Middle Korean *-n do*. Nowadays, one can still find *-n do* used as a nominalizer and *-n do* with some phonological changes, yielding *-n ju*. In modern Korean, the morpheme *-n ju* is fixed as a complementizer, while the status of *-n geot* is still controversial whether it is nominalizer or complementizer.¹⁴ Consider the usage of Middle Korean *-n do* in (29), and that of the developed form *-n ju* in (30).

- (29) [‘*Saekhyang*’-*i da dyoh-n do*]-*l ara...*
 [‘color-odor’-NOM all good-LNK NMLZ]-ACC know...
 ‘As (pro) knows that (it) has good color and odor, ...’
 (*Wol-in Chengangjigok* (1449) – Lee, 1976)

- (30) *Keu-neun [woori-ga yogi o-n ju]-l moreun-da*
 he-TOP [we-NOM here come-LNK NMLZ]-ACC not.know-DEC
 ‘He doesn’t know that we came here’

The Middle Korean morpheme *-do* in (29) cannot be replaced by *-ju* in the same context nowadays, but is only replaceable with *geot*. In Middle Korean, both of these sentential nominalizers *-do* and *geot* were used in affirmative and negative contexts,

¹³We cannot find a suitable romanization for the old form *-n /dɔ/*, so I will use *-n do* for this.

¹⁴Kim (1997), for example, argues that there are clear distinctions between nominalizer *-n geot* and complementizer *-n ju*.

Figure 2.1: Distribution of the Middle Korean *-n do* – based on Lee (1976)

					‘see’	
					‘like’, ‘love’	
subordinate clause	+	<i>-n do</i>	+	<i>-l(ACC)</i>	+	‘consider’
						‘say’
						‘know’

but *-ju* has developed mainly for negative contexts as in (30), while *geot* has developed more productively. That is, *geot* can be used anywhere.

Figure 2.1 shows the distribution of *-n do* in Middle Korean. Most notably, this nominalizing construction was already being used as a Complementizer.

Unlike other East Asian nominalizers, Korean needed two distinct morphemes, i.e. linking part *-n* and pronominal part *do*, even in Middle Korean.

2.3.3 Korean Linkers *-eui* and *-n*

As noted earlier in §2.1, Korean does not make use of the nominalizer *-n geot* to express genitive marking. Instead it recruits the Genitive marker *-eui*, which is distinct from the other Linking morpheme *-n*.

- (31) a. *na-eui chaek*
 I-GEN book
 ‘my book’
- b. ? *na-n chaek*
 I-ADN/TOP book
 ‘I’m (a) book’

The above example (31) seems to explain why Korean Linker *-n* does not function as a Genitive marker – this morpheme sounds the same as Korean topic marker *-n*. If

we replace the genitive marker *-eui* to *-n* as in (31b), this expression can also mean ‘I am a book’, which is logically not acceptable. There is however one particular instance in Korean that shows the Linker *-n* functioning as a Genitive marker, as in (32). Nevertheless, one reason for us to conclude that *-n* is adnominal is that the Genitive marker *-eui* immediately follows *-n*.

- (32) a. *neo-n-eui jip*
 you-ADN-GEN house
 ‘your house’
- b. ? *keu-n-eui jip*
 he-ADN-GEN house
 ‘his house’
- c. *Cheolsoo-n-eui jip*
 Cheolsoo-ADN-GEN house
 ‘Cheolsoo’s house’

Moreover, we also find remnant evidence of Genitive Pronominal uses of *-n-eui* (actually realized as *-ne*), as shown in (33). This is the only example which allows *-eui* to work as a Pronominal, without the modified head noun.

- (33) a. ? *neo-n-eui*
 you-ADN-GEN
 ‘your place’
- b. * *keu-n-eui*
 he-ADN-GEN
 ‘his place’
- c. *Cheolsoo-n-eui*
 Cheolsoo-ADN-GEN
 ‘Cheolsoo’s place (family)’

Although we find some restriction on the genitive use of *-n* as in (32b), and the modified noun should always be ‘(the) house’ or some place nouns, it is plausible that

Linker *-n* has lost its function as genitive marker, possibly owing to collision with the topic marker *-n/neun*. Another possible claim deduced from the examples above is related to a divergence in the developmental pathway of the two linking morphemes *-eui* and *-n*. In either case, we obtain some insight into the development of the Korean nominalizing system. It is possible that the two types of markers (one for genitive or associative relationship and the other for more complex relationship that denotes properties of a reference, e.g. Adjective Phrases and RCs) might have been competing with each other at first. Later on, *-eui* was restricted to genitive marking, not particularly denoting the property of the head noun, but only specifying the possessive relationship. Meanwhile, *-n* increasingly began to serve as a Linking morpheme that specifies the property of the head noun. More diachronic studies focusing on the functions of the Linkers *-eui* and *-n* in Old and Middle Korean are needed to help clarify the relationship between these two Linking morphemes.

2.4 Summary

In the Korean nominalizing system, different types of modification and nominalization are found at the Determiner, Pronominal, and Nominalizer levels. Table 2.1 summarizes our claim that Pronominal usage is the “bridge” level between Determiner and Nominalizer, and Korean overt Pronominal *geot* participates in this development.

This developmental path diagrammed in Table 2.1 above highlights a development in which a noun can be elided and the determiner that specifies it then becomes a pronominal referring to an entity (“thing”) ((A) → (B)), and this pronominal can develop into a larger entity (“event”) during the process of ((B) → (C)). Finally, in the stage of sentential nominalizer in (C), *-n geot* can further develop into a functional marker such as stance marker. This will not clearly nor explicitly articulated in this

Table 2.1: Types of modification and nominalization in the Korean

Function	Syntactic environment	Form	
(A) Determiner	Genitive Phrase	-eui	N
	Associative Phrase	-e/ -n	N
	Adjective Phrase	-n	N
	Headed RC	-n	N
(B) Pronominal	Genitive Phrase	-eui	geot
	Associative Phrase	-eui/ -n	geot
	Adjective Phrase	-n	geot
(C) S-Pronominal	Headless RC	-n	geot
	Sentential Nominalizer	-n	geot
	Stance	-n	geot

thesis.

In the following chapters, I will argue that there are such distinctions in Japanese *no* (Chapter 3), Mandarin *de* and Cantonese *ge* and (Chapter 4) as well, but the distinctions are not overt in these nominalizers.

Chapter 3

Development of Japanese *no*

In the previous chapter, we observed that Korean nominalizers *-eui geot/ -n geot* comprise of two parts: linking and (pro)nominalizing morphemes. In this thesis, I claim that Japanese *no*, Cantonese *ge*, and Mandarin *de* are used either as a Linker or a Pronominal depending on the construction. In other words, these morphemes should be compared to the first part of Korean morpheme, i.e. *-eui/-n*, when they function as a linker, and to the second part, i.e. *geot*, when they are used as a pronominal or nominalizer.

We have also seen that the use of Korean *-eui geot/ -n geot* as pronominal facilitates the development for its use as Sentential Pronominal, often as complementizer and stance marker. From now on, we attempt to track down the developing paths of the other three East Asian nominalizer as well. In this chapter, I will compare the Japanese nominalizing system first because of its strong structural similarity with Korean, followed by Mandarin and Cantonese in the next chapter.

3.1 Syntactic behavior of *no*

As briefly introduced in §1.2, Japanese *no* shows multi-functions in pre-nominal modifying structures. Among the four East-Asian nominalizers, Japanese *no* looks like the only nominalizer that appears everywhere, from linker to pronominal, and even as complementizer. Whereas Korean *-n* appears to have lost or has not developed its genitive function at all, Japanese *no* retains it. The versatility of *no* makes the status of pronominal construction ambiguous. Various pre-nominal modification structures will be shown below. These are genitive phrases, adjectival phrases, and headed and headless RCs, respectively.

Genitive phrase

In genitive constructions, the morpheme *no* can occur with either the head noun as in (34a) or without the head noun as in (34c).

- (34) a. *sensei no kuruma*
 teacher GEN car
 ‘teacher’s car’
- b. ? *sensei no no*
 teacher GEN one
 ‘teacher’s stuff’¹
- c. *sensei no φ*
 teacher one
 ‘teacher’s stuff’

As discussed in the previous chapter, Korean uses the genitive marker *-eui* for (34a), and the pronominal *geot* for (34c), while in Japanese both functions as a linker

¹This structure is grammatical in some Japanese dialects. Discussions will be presented later.

and a pronominal are realized in one form, namely *no*. The contrast in Korean is further highlighted in (35) below.

- (35) a. *seonsaengnim-eui chah*
 teacher-GEN car
 ‘teacher’s car’
- b. *seonsaengnim-eui geot*
 teacher-GEN thing
 ‘teacher’s stuff’
- c. * *seonsaengnim-eui φ*
 teacher-GEN
 ‘teacher’s stuff’
- d. ? *seonsaengnim(-φ) geot*
 teacher(-φ) thing
 ‘teacher’s stuff’
- e. * *seonsaengnim-n geot*
 teacher(-ADN) thing
 ‘teacher’s stuff’

Note that structure (35d), which drops genitive morpheme *-eui* is less ungrammatical than pronominal genitive structure (35c), which ends the genitive construction with the genitive *-eui*.

The problem we are facing is how to analyze *no* in the pronominal structure like (34c). Is this the case that two *nos* are reduced into one *no*? Or, should we follow the claim of Kitagawa and Ross (1982:21-3) that there is no head noun, but having *no* only as a linking morpheme, as seen in the example above (*sensei no + φ*)?

Cross-dialectal comparison may provide an answer to this question. (34b) is often considered as an ungrammatical structure, but this construction exists in some Japanese dialects. In these dialects, the genitive case marker and pronominal appear together as shown in (36).

- (36) a. *Kore-wa watashi no no de-wa arimasen*
 this-TOP I GEN one COP-TOP NEG
 ‘This is not the one of mine’ (Yuzawa 1944)
- b. *John no ga*
 John GEN one
 ‘the one which is John’s’ (Toyama dialect: Murasugi 1991)

Using evidence from a dialect as in (36a), Yuzawa (1944) claims that the pronominal *no* is independent from the genitive marker *no*. In (36b), as argued in Murasugi (1991), it seems possible to regard *ga* as the pronominal realized instead of *no*. It is worth adding that Okutsu (1974:357) views this phenomenon as a deletion of the genitive case marker, which is the first *no*.²

Though with some help of dialects, it is still not enough to view the status of Japanese *no* only with synchronic description. In the next section, we will add some diachronic description, in order to view such multi-functional nominalizer more clearly whether *no* is the result of conflation of genitive *no* and pronominal *no*, or some other thing.

Adjectival phrase

In an adjectival phrase, *no* is recruited not as a linker, but as pronominal only.³ This contrasts with the case of genitive uses of *no*. Consider (37).

- (37) a. *aka-i suika*
 red-NPAST watermelon
 ‘a/the red watermelon’

²Later, some phonologists developed this further as so-called “haplology”. Lawrence (1997) claims that this phenomenon should not be viewed as the deletion of genitive marker *no*, but simultaneous pronunciation of two non-distinct phonological representations.

³Adjectival phrases such as (37) are attested in child Japanese (see Horie, 1998).

- b. * *aka-i no suika*
 red-NPAST NO watermelon
 ‘a/the red watermelon’
- c. *aka-i no*
 red-NPAST NO
 ‘a/the red one’

How can we explain the absence of *no* in the adjectival phrase in (37a)? It is plausible that the use of the Japanese adnominals (“rentaikei” verbal endings) *-i* blocks the use of *no*, as highlighted in (37b). On the other hand, in (37c), we have two possibilities of getting the structure *aka-i no* ‘(the) red one’:

- (i) *aka-i no* ϕ
- (ii) *aka-i* ϕ *no*

I’d rather take a position that Japanese *no* conflates both values, i.e. linking morpheme *no* + pronominal *no*, so it is compared to Korean *-n geot*, where *-n* serves as a linker and *geot* as a pronominal. The adjective phrase is no longer a nominal domain, and the first *no* as a linker cannot be compared to Korean genitive marker *-eui*, but the verbal linker *-n*.

Headed and headless RCs

Let’s now examine a case similar to the adjectival phrase. It is notable that uses of *no* are also restricted to the headless RC construction. (38a) shows the absence of *no* as Relativizer in headed RC constructions. Just like the case in the adjectival phrase, using the adnominal *no* in headed RC will lead to an ungrammatical expression (38b), while using *no* in headless constructions as in (38c) is grammatical.⁴

⁴Headed relative clauses with *no* were attested in pre-modern Japanese (Murasugi 1991, cited in Horie 1998).

- (38) a. *kinoo watashi-ga kat-ta uchi*
 yesterday I-NOM buy-Past house
 ‘the house which I bought yesterday’
- b. **kinoo watashi-ga kat-ta no uchi*
 yesterday I-NOM buy-Past LNK house
 ‘the house which I bought yesterday’
- c. *kinoo watashi-ga kat-ta no*
 yesterday I-NOM buy-Past one
 ‘the one which I bought yesterday’

In both (37) and (38), the status of *no* becomes prominent as pronominals rather than linkers. I further pursue this claim with diachronic evidence in the next section.

3.2 Diachronic perspectives on *no*

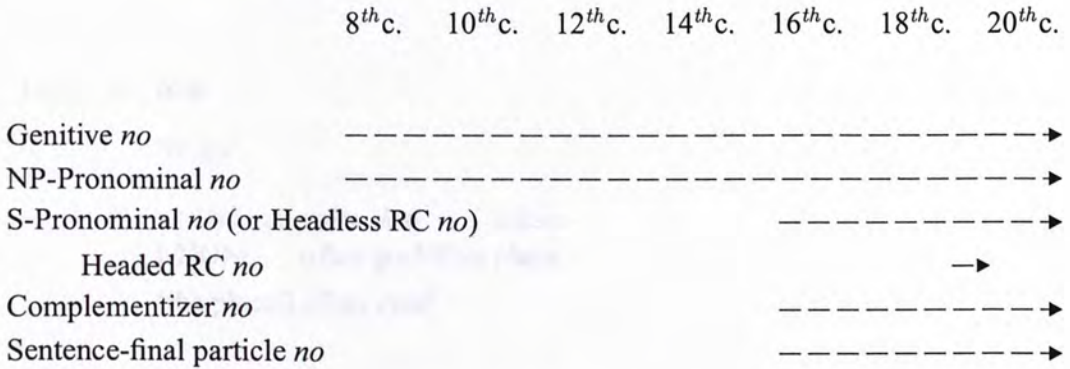
Now, we turn to some diachronic accounts of Japanese nominalizer *no*. Horie (1998) suggests a unidirectionality account for Japanese *no*. According to him, the grammatical uses of *no* might have started as Genitive marker. Both genitive *no* and Genitive Pronominal *no* were attested around the same period (the 8th century). The morpheme *no* as Pronominal gets more productive and develops into Sentential Pronominal, yielding both complementizer and cleft constructions. Yap et al. (2004) add that it is a natural process for cleft *no* to further develop into Stance marker *no*. Figure 3.1 highlights the diachronic development of Japanese *no*.

In sum, Horie (1998) and Yap et al. (2004) proposed the following developmental pathway for Japanese *no*:

Genitive marker → Genitive Pronominal → S-Pronominal → Complementizer and Cleft → Stance

There is another perspective on the development of Japanese *no*. Noting that *no* as genitive marker and *no* as genitive pronominal existed around the same period, Nishi

Figure 3.1: Grammaticalization of Japanese *no* – adopted from Yap et al. (2004)



(2004) suggests a dual pathway perspective for the development of *no*. As highlighted in Table 3.1, Horie posited that Complementizer uses of *no* evolved from Genitive and Pronominal uses of *no*, with the sentential *no* construction being the pivotal “bridging” construction.

Table 3.1: Unidirectionality view on Japanese *no*: from Genitive marker to Complementizer

Genitive marker	→	Genitive Pronominal	→	Sentential Pronominal	→	Complementizer
N <i>no</i> N		N <i>no</i>		Sentence <i>no</i>		Sentence <i>no</i>

(Adopted from Horie 1998, and Yap et al. 2004)

Nishi (2004) introduced a “dual pathway” account to distinguish the emergence of Complementizer *no* from headless RC *no* constructions. According to Nishi, there was another class of nominalizer in Classical Japanese. This is the “rentaikei (adnominal)”, which refers to the conjugation of adjectives and verbs in present-day Japanese. The morpheme *-i* in (39) and *-u* in (40) attached to verbal adjectives are known as Adnominals in Japanese.

(39) a. *attarashi-i*

‘new’

- b. *attarashi-i taiken*
 new-NPast experience
 ‘a new experience’

- (40) a. *ik-u*
 ‘to go’
 b. *watashi-ga yoku ik-u tokoro*
 I-NOM often go-NPast place
 ‘the place I often visit’

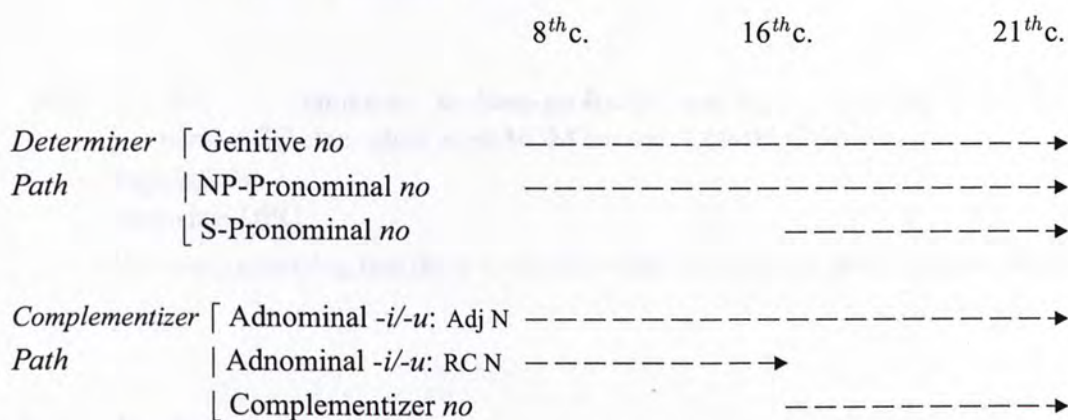
While “rentaikei” only refers to verbal endings in modern Japanese, the pre-modern Japanese example provided by Kaplan and Whitman (1994) shows that there *was* an overt adnominal morpheme, i.e. “-u” linking the RC to the head noun. The adnominal -u in (41) is used with a stronger linking function:

- (41) *otoko-no ki-tar.i-ker-u kariginu*
 man-GEN wear-Perf-Past-ADN hunting clothes
 ‘the hunting clothes the man had been wearing’

(*Ise Monogatari* 1 – simplified from Whitman and Kaplan (1994))

Nishi (2004) suggests a dual pathway account of *no*. One pathway is the “Determiner path”, and the other is the “Complementizer path”. As highlighted in Figure 3.2, Nishi claims that the function of Japanese *no* as a Complementizer was not directly derived from Sentential Pronominal. She assumes that *no* was attested as a Genitive marker and Genitive Pronominal at almost the same time (8th century), and these usages continue to the present, following the “Determiner path”. Meanwhile, Middle Japanese had clear adnominals -i and -u, nowadays known as mere adjectival/verbal endings, and these morphemes contributed to the “Complementizer pathway”, until the adnominal function (that of “rentaikei”) disappeared around 16th century.

Nishi’s dual pathway view explains that the S-Pronominal *no* was naturally de-

Figure 3.2: Dual pathway of Japanese *no* – Simplified from Nishi (2004)

rived from Genitive Pronominal usage, and when the “loss of adnominal (*rentaikei*) function” took place around 16th century, there was a need for the emergence of a new form to fulfill the gap after the loss of adnominal function, which had two distinct functions: linking and nominalizing function.⁵

Both Horie’s (1998) and Nishi’s (2004) account are in fact quite comparable with each other. Horie highlighted a unidirectional ontological development, while Nishi highlighted language-internal pressures involving the need to recruit a new nominalizer to replace the older forms. Essentially, Horie adopted a semantic approach, while Nishi used a syntactic approach. Here I would like to add that the emergence of complementizer *no* was also facilitated by the head-final word order in Japanese. When a clause with *no* appears in matrix object position (so it becomes a small clause (SC)), it functions as a sentential pronominal or complementizer as in (42). Alternatively, with a copula in the main clause, the whole sentence naturally gets the characteristics of Cleft construction as in (43).⁶

⁵Also see Konoshima (1966) for the relationship between the loss of adnominal (“*rentaikei*”) in Japanese and the need for a new set of nominalizers.

⁶In Japanese, there are other kinds of nominalizers other than *no*. Particularly in complementization, Japanese also uses the sentential nominalizer *koto* for propositions, as shown below in (1).

- (42) [_{SC} *Kinoo ame-ga hut-ta no*] *sit-te-iru*
 [yesterday rain-NOM rain-Past COMP] know-Prog-DEC
 ‘I know it rained yesterday’ (Horie 1998)

- (43) [_{SC} *Te-o tataku-to kodama-ga kotaeru no*]-*wa taihen*
 [hand-ACC clap-when echo-NOM answer COMP]-TOP very
huyukai-da
 annoying-DEC
 ‘It is very annoying that there is an echo when he claps his hands’ (Horie 1993)

3.3 Summary

In this chapter we have seen the multiple natures of Japanese *no*, which has many different syntactic roles, from genitive marker to complementizer. The exposition given highlights its similarity with Korean *-eui* and *geot*. In other words, Japanese *no* as a genitive or associative marker can be compared to Korean functional linking morpheme *-eui*, and this usage is well spelled out and developed with genitive/ associative pronominals functioning almost simultaneously.

I also presented some diachronic accounts made by Horie (1998), Yap et al. (2004) and Nishi (2004), among others, hoping to best interpret the status of *no*.

-
- (1) a. *Mary-wa [John-ga toori-o wataru] no-o mi-ta (event)*
 Mary-TOP [John-NOM street-ACC cross] NMLZ-ACC see-Past
 ‘Mary saw John cross the street’
- b. *Mary-wa [John-ga toori-o wata-ta] koto-o sit-ta (proposition)*
 Mary-TOP [John-NOM street-ACC cross-Past] NMLZ-ACC know-Past
 ‘Mary learned that John crossed the street’ (from Horie 2000)

Chapter 4

Mandarin *de* and Cantonese *ge*

This chapter examines the development of Mandarin nominalizer *de* and Cantonese nominalizer *ge*. Despite some differences found in these two nominalizers, their word orders are very similar. Throughout the thesis, I attempt to show that the nominalizing systems in some of the East Asian languages are actually comprised of two distinct parts: one as a linker, and the other as a pronominal. In Korean, the linking particle *-eui* (for nominal domain, such as possessive or associative phrases) and *-n* (for verbal domain, such as adjective phrases and RCs) and pronominal part *geot* have been compared to the other three East Asian nominalizers. In this chapter, I will focus on finding a more unified account of syntactic statuses and the developments of Mandarin and Cantonese nominalizers. I will support the statuses of *de* and *ge* as linkers in structures of possession, association, and relativization on the one hand, and *de* and *ge* as pronominals on the other.

4.1 Synchronic descriptions

We begin by describing the multiple functions of nominalizers *de* in Mandarin and *ge* in Cantonese, before we discuss the relationship between their syntactic natures and the restrictions on Complementizer function.

4.1.1 Dual properties of Mandarin *de* and Cantonese *ge*

Apart from sharing linking functions, Cantonese *ge* and Mandarin *de* also share similar functions as pronominals. In (44), *de* and *ge* are interpreted as Genitive Pronominal, and in (45).

- (44) a. *wǒ de* (Mandarin)
I one
b. *ngóh ge* (Cantonese)
I one
'mine/ my stuff'

- (45) a. *hóng de*
red one
b. *hùhng ge*
red one
'a/the red one'

Both Mandarin *de* and Cantonese *ge* as pronominals can appear after a clause as shown in (46).

- (46) a. *wǒ mǎi de*
I buy DE
b. *ngóh máaih ge*
I buy-ge

‘the one I bought’

When head nouns are followed, Mandarin *de* and Cantonese *ge* are treated as Linkers in (44), (45), and (46). Bringing back the Korean pronominal structures here, it becomes clearer to view *-eui geot* and *-n geot* as both structurally and functionally equivalent to Cantonese *ge* and Mandarin *de*, and even to Japanese *no*. In other words, if the null nouns exhibited in the Cantonese, Mandarin, and Japanese examples above are only phonologically null, we should admit that *ge*, *de*, and *no* as Linker and Pronominal are realized or reduced in one morpheme, and Korean seems to provide supporting evidence for this phenomenon. Therefore, Korean adnominal morpheme *-n* and bound noun *geot* should be viewed as a whole, as an equivalent form of *ge*, *de*, and *no* when these morphemes are used as pronominals.

4.1.2 Zhu’s classification of Mandarin *de*

Based on the various functions of Mandarin nominalizer *de*, Zhu (1961) proposes the following categories:¹

- (i) *de*₁— adjectival adposition (for reduplicated adjectives, or stative verbs)
- (ii) *de*₂— nominalizer
 - (a) monosyllabic Adj + *de*₂
 - (b) NP + *de*₂
 - (c) VP + *de*₂

¹In Zhu (1961)’s classification, there is one more category, i.e. *de*₃— adverbial adposition (for disyllabic adverbs). This shows that *de* is also used in adverbial phrases. However, since such *de* with adverbial phrases is generally regarded as a different morpheme, I would not include it in the main discussion.

(d) S + *de*₂

The morpheme *de* of Mandarin Chinese is unique compared to the other East Asian adnominals, i.e. Japanese *no*, Cantonese *ge*, and Korean *-n geot*, in that it is also used in reduplicated adjectival phrases such as (47).

- (47) a. *chéng chéng de*
 long long DE
 '(somewhat) long'
- b. *hóng hóng de*
 red red DE
 'reddish'

In (47), we see *de* is used with a reduplicated adjective, or stative verb to function as an attribution suffix. In this thesis, we focus only the second usage of *de*, i.e. (*de*₂) as Nominalizer.

Zhu argues that "S + *de*₂", whose type belongs to "S + *de*₂", should be treated uniformly as a noun phrase. Since "S + *de*" can appear in object position, it is strange not to assign it a nominal status when it is in modifier position, in spite of some limitations (this comparison is discussed in more detail in the next section, particularly with reference to examples (52) and (53)). Primarily this is on the basis that it can appear in the object position. However, an object complement is not restricted to noun phrases alone. It has been a standard analysis that complement of "knowing" verbs like "know," "hear," or "understand" take sentential complements (i.e. CPs).² Note that in Zhu (1980:122-123), the object of "knowing" verbs can be a CP, where a CP is interpreted as a nominalized clause construction.

²Zhu's paper dates back in 1961, when modern Transformational Generative Grammar was yet to gain ground in China.

4.1.3 [Demonstrative + Classifier] structure in Cantonese

Cantonese *ge* allows classifiers referring to ‘thing’, ‘event’, and ‘fact’, to replace *ge* in linker position. Matthews and Yip (1996:109) describe these two ways of modifying a noun in Cantonese as follows:

- (i) modifier + *ge* + N
- (ii) modifier + [demonstrative + classifier] + N

Thus, in Cantonese (and Mandarin, with some restrictions), the adnominal *ge* is not the only linker available. In example (48), *gódīi*, i.e., the structure [demonstrative + classifier] meaning ‘those’ replaces the linking morpheme *ge*.

- (48) *síhk gó dī yéh*
 eat that CL thing
 ‘things for eating’ (Matthews & Yip, 1996:109)

In possessive construction, the structure [demonstrative + classifier] is not obligatory, as shown in (49). A classifier alone can replace genitive *ge*, as given in (50).

- (49) *lóuhbáan (gó) ga chē*
 Boss (DEM) CL car
 ‘(the) boss’s car’ (p.108, *ibid.*)

- (50) *lóuhbáan ge chē*
 Boss GE car
 ‘(the) boss’s cars’

There is a slight difference between (49) and (50). The former holds slightly stronger referentiality than the latter. For instance, when using (49), the native speakers would presume that the boss is most likely to have only one car, while the car referred to in (50) could be one of several other cars.

4.1.4 *ge* insertion after Classifier in Cantonese

Cantonese nominalizer *ge* can sometimes be inserted even after a classifier, and this makes it possible for *ge* and classifier to appear together in sequence.

Wong (1999) conducted a study concerning the syntactic variation of the use of Cantonese *ge* inserted after the classifier. Her data collection was based on recent data based on movies and TV programme scripts in the 1990s, relying on Cheung (1972)'s statement that *ge*-insertion with sortal classifiers began to develop around this time.

- (51) a. *nī go ge wuih-háau*
 this CL GE public-exam
 'this public examination'
- b. *nī go ge 'contract'*
 this CL GE contract
 'this contract'
- c. *nī go ge kinghoeng*
 this CL GE tendency
 'this tendency'

Her data (e.g. (51)) strengthen the hypothesis that Cantonese *ge* as a linker has been developing secondarily, adding the semantics of specification.³

4.1.5 Nominalization and further development in Mandarin *de*

However, recruiting Mandarin *de* and Cantonese *ge* after a clause without a referent causes problems as in (52).

- (52) a. ?*Tā zhīdào [wǒ zuótiān xiě shī] de*
 (s)he know [I yesterday write poem] DE

³There are various types of classifiers in her data, other than *go*.

- b. ? *Kéuih zīdou* [*ngóh kàhmyaht sé sī*] *ge*
 (s)he know [I yesterday write poem] GE
 ‘(S)he knows that I wrote a poem yesterday’

We seem to have a problem especially in interpreting *de* and *ge* as sentential nominalizers of the complementizer type. However, it is not the case that this is structurally impossible. We do find clausal structure with *de*, but with a different interpretation – for example, as a complementizer for making Cleft construction, or as a stance marker. (53) are such examples where *de* is interpreted as a stance marker.⁴

- (53) a. *Tā zhīdào* [*wǒ zuótiān lái guo*] *de*
 (s)he know [I yesterday come ASP] DE
 ‘(S)he knows that I came yesterday’
- b. *Tā zhīdào* [*nǐ zhǎo guo tā*] *de*
 (s)he know [you look for ASP he] DE
 ‘(S)he knows that you looked for him’

This will be discussed more in §5.2, where I claim that Chinese recruit zero Complementizers, depending on where they are located.

Li and Thompson (1981) treat the relativization in Mandarin Chinese as nominalization. The nominalized phrase, according to them, has the same characteristics as the relative clause, in that it must contain a verb with at least one of its participants unspecified (1981:577-580). (54) is an example where the verb has no subject, and (55) with no direct object.

- (54) [_{RC} *zhòng shuǐguǒ de*] *nóng rén*
 [grow fruit NMLZ] farmer
 ‘(the) farmer(s) who grow fruit’ (Li & Thompson, 1981:580)

⁴I thank Gu Yang for these examples.

- (55) [_{RC} *tāmen zhòng de*] *shuǐguǒ*
 [they grow NMLZ] fruit
 ‘the fruit that they grow’ (ibid.)

They also provide ungrammatical structure like (56):

- (56) * [*wǒ mài qìchē*] *de*
 [I sell car] NMLZ
 ‘(?) that I sold cars’ (p.579, ibid.; translation added)

If we follow their claim that (56) breaks the natural patterns of the nominalization in Mandarin Chinese, it is understandable that *de* cannot be used as a sentential nominalizer or a complementizer. However, such structure *does* exist, when we interpret *de* as a stance marker as in (57):

- (57) *wǒ mài qìchē de*
 I sell car NMLZ
 ‘(You know) I sell cars’

With copula verb *shì*, i.e. in Cleft and Pseudo-cleft constructions, the above example can have at least two readings as in (58) below:

- (58) a. *wǒ shì mài qìchē de*
 I COP sell car NMLZ
 ‘It’s the car that I sell’
 b. *wǒ shì mài qìchē de*
 I COP sell car NMLZ
 ‘It’s me who sells the car’

As shown in (58b), Chinese seems to allow *de* to be used as sentential pronominal. I assume that in Chinese, due to the head-initial word order (except in pre-nominal modification constructions), using sentential pronominal *de* is redundant, unless the

sentence wants to emphasize or add modality. More discussion on this “*shi - de*” construction will be treated under the puzzling examples in Chapter 5.

4.2 Diachronic perspectives

In the previous section, we observed that Chinese uses Classifiers together with Determiners for nominalizing things. Let us take a look at the origin of Mandarin *de*. Zhu (1966:112, footnote) claims that *de* is developed from the pronominal *de* and *di*.⁵ Moreover, through (59), he shows the two parallel forms of *di*.

- (59) *zhè jiù-shì nèige mǎihuā-de dī máozi*
 this exactly-is sell-flower-DE DI hat
 ‘This is the hat of the one who sells flower.’ (Li Jinxi 1954:88)

There is another candidate for the origin of *de*. The morpheme *zhi* is found in Classical Chinese writing, first as a demonstrative/ interrogative pronoun (Shang Dynasty: 16th-11th century B.C.), then as a genitive marker and a relativizer from 500 B.C. (for more detail, see Djamouri (1997)).⁶

In their earlier work, Shi and Li (1998) posit that *de* originated from the demonstrative pronoun *di* and now becomes a functional particle, and used as an interrogative pronoun at the same time.

The claim of Shi and Li (2002) on *de* in Chinese is basically consistent with Simpson and Wu (2001), in that they both view grammaticalization as a process that is subject to the influence of the overall structural change of a language. However, Shi

⁵Zhu (1966) is not the first linguist who claimed so. Lu (1943) gives ample historical evidence that *dè* is the predecessor of *de*.

⁶Classical Chinese also used other genitives (e.g. *zhi*, *zhe*, *suo*, and *xu*). Among these, *zhi* has further evolved into nominalizers as well. See Wang (1991) and Jiang (1999), among others.

Table 4.1: Shared properties of *zhi* and *de* (based on Shi and Li 2002)

	<i>zhi</i>	<i>de</i>
Demonstrative pronoun	✓	✓
Interrogative pronoun	✓	✓
Possessive marker	✓	✓
Associative marker	✓	✓
Relativizer	✓ (optional)	✓
Pronominal	✓	✓

and Li focus on the Chinese classifier systems, while Simpson and Wu focus on the demonstrative – determiner system. I appreciate both claims, noting in particular that such historical data reveal that classifier, demonstrative, and adnominal in Chinese share structural and semantic similarity as determiner.

4.2.1 Competition between Classifier and Demonstrative pronoun

Using [Demonstrative + Classifier] instead of linker, pronominal, or nominalizer is more common in Cantonese. It is believed that Cantonese linker, pronominal, and nominalizer *ge* originated from the Classifier *go*.⁷ Nowadays, Cantonese need a [Demonstrative + Classifier] construction (e.g. *gó go*, or *gó di*) when replacing nominalizer *ge*. However, there was a competition between Classifier and Demonstrative Pronoun in classical Chinese (Shi & Li 2002).

Cantonese Classifier *go* is actually the same classifier as *ge* in Mandarin.⁸ This morpheme is known as a classifier both in Classical Chinese (dating as far back as the Wei-Jin period: 3rd-6th century A.D.) and in Modern Standard Chinese. Cao (1986)

⁷See Tang (2005) and Yang (1993), among others.

⁸Mandarin classifier *ge* is pronounced as [kə], while Cantonese nominalizer *ge* is pronounced as [kɛ].

and Shi & Li (2002) suggest that this classifier had grammaticalized to a marker of pre-nominal modifying constructions (e.g. genitive marker, and relative clause marker) and thus competed with the morpheme *de*. Interestingly, Mandarin classifier *ge* was also used as a demonstrative pronoun in an earlier period, as shown in (60).

- (60) *ge ren hui di?*
 that person avoid-as-taboo what
 ‘What does that person avoid as taboo?’ (*Bei Qi shu*, c. AD 600)

We do not find such usage of classifier *ge* in Modern Standard Chinese. Note that Mandarin classifier *ge* is different from Cantonese nominalizer *ge*. Nevertheless, we can support the claim that a Classifier may develop into an adnominal morpheme with data from Wu dialect and many Southern Mandarin dialects. For example, in Jinhu dialect, the classifier *ge* functions like a relativizer, or a linker in pre-nominal modifying structures as in (61):

- (61) *Wo kanjian zuo zhuangjia ge ren*
 I see do farm LNK person
 ‘I saw one person who is a farmer’
 (Jinhu dialect, from Wang91; Shi & Li 2002)

The historical example in (60) and the dialectal example in (61) reveal the structural and semantic similarity among various types of Determiners in Chinese – Demonstrative, Classifier, and Nominalizers (i.e. Genitive, Associative, and RC marker).

We have also examined the possible relationship between Classifier of Chinese languages and Nominalizers. It was noticed that the Classifier system in Chinese has also facilitated the rise of certain nominalizing systems. This seems possible in Chinese, because the classifier system is one type of mechanism for determiner function.

4.2.2 From Classifier to nominalizer: Cantonese *ge*

Historical data of Cantonese is seriously lacking, due to the fact that Cantonese is never made an official written language in the course of Chinese history. Yang (1993) claims that Cantonese *ge* might have originated from the classifier *go*. The function as this Classifier *go* is basically the same as Mandarin Classifier *ge*.

Many similar claims about the relationship between classifier and nominalizer have been made for various Chinese dialects. In spite of the lack of historical support, I follow Yang's claim (1993) that Cantonese *ge* has the same pathway and same motivation as those of Mandarin Chinese. As for Mandarin Chinese, Shi and Li (2002)'s claim that *de* was induced by the development of classifier constructions in Chinese is particularly relevant. According to them, an associative phrase should appear after the reanalysis of *di* (predecessor of *de*) as relativizer. It is also worth noting that genitive uses of *di* (i.e. NP *di/de* (NP)) was a relatively late development, appearing in the 12th century (Shi & Li 2002).

4.3 Summary

Noun modifying phrases are placed pre-nominally even in Mandarin and Cantonese, whose canonical word orders are SVO. In such constructions, these two Chinese languages use their adnominals *de* and *ge* as linking morphemes (in genitive phrases, associative/ adjective phrases, and relative clauses) and pronominals. When used as linkers in associative/ genitive phrases, *de* and *ge* are easily compared to Japanese *no* and Korean *-eui*, while in more alienable modifying expressions such as adjective phrases and relative clauses, they are compared only with Korean *-n*, but not with Japanese *no*. Meanwhile, when *de* and *ge* constitute pronominals, they are compared to Korean (*-eui*) *geot* (for possessive/ associative phrases) and (*-n*) *geot* (for adjective

phrases and RCs).

We can divide the functions of *de* and *ge* into two distinct parts that onto the distinct morphemes in Korean, namely, *-eui/-n* and *geot*. However, we have also observed that Cantonese *ge* and Mandarin *de* do not appear in some sentential nominalizations, such as 'I know [_{CP} Small Clause]' construction. I assume that Chinese basically allow sentential nominalizations. This chapter also showed that Chinese relativization might be another type of nominalization. I posit that the restrictions are inevitable since they are affected by their basic word orders. More explanations on this will be shown in the next chapter.

incompatibilities

Many similar functions shared by the four languages are observed in the main clause, but to some differences in their conditions and functions. This is a great puzzle must be that Japanese, Cantonese, and Mandarin may be have the same phrase for multiple functions. This fact is a great puzzle, and it is not in their different forms in Korean (*ni*, *ni*, and *ni*). Thus, we have some remaining questions to follow.

- (i) What is the only Japanese *ni* and *ni* are shared with Cantonese *ge* and Mandarin *de* and Cantonese *ge* have the same functions?
- (ii) Despite all their incompatibilities, why would the same word be used in the same way?
- (iii) How can the same word be used only in Cantonese and Mandarin?

Chapter 5

Some solutions on their incompatibilities

Many similar functions shared by the four East Asian nominalizers face problems for unifying account, due to some differences in their syntactic and morphological behaviors. The biggest puzzle must be that Japanese, Cantonese, and Mandarin appear to have one morpheme for multiple functions, while such multiple functions are realized in three different forms in Korean (i.e. *-eui*, *-n*, and *geot*). There are some other remaining questions as follows:

- (i) Why have only Japanese *no* and Korean *-n geot* developed into Complementizer, while Mandarin *de* and Cantonese *ge* have restrictions on such development?
- (ii) Despite all their incompatibilities, why would the stance marking functions still be unanimously developed?
- (iii) How can we explain why the tense/aspect is realized only in Korean linking morphemes?

In an attempt to solve these puzzles, this chapter begins with a discussion on “definiteness” and “determiner” in §5.1. In §5.2 we discuss the relationship between word order and the complementizer constructions. In §5.3, we examine the structural and semantic-pragmatic conditions that facilitate the robust development of these East Asian nominalizers as Stance markers. Finally in §5.4, we will deal with the time reference reflected in Korean linking morphemes.

5.1 Definiteness in Nominalizers

So far, we examined the two explicit forms in Korean nominalizers, *-euil* *-n* (linking part), and *geot* (pronominal part), that are compared to Japanese *no*, Cantonese *ge* and Mandarin *de*. In this section, I put the various linking morphemes (genitive, associative, adjective marker and relativizer) under the notion “determiner” so that I can highlight the semantic similarity in both the Linkers and the Pronominals. The claims about the definiteness natures of nominalizers already exist.¹

5.1.1 Type I Determiners: Linking morphemes

I regard the Linking morphemes in the four East Asian languages as Determiners, because these languages use overt Linking morphemes, which is comparable to English in the constructions like (62). Let’s take Cantonese as a representative example of the four East Asian languages, as in (63).

- (62) a. *the* shirt
 b. *my* shirt
 c. *new* shirt

¹See Lyons (1999), Panagiotidis (2005), and Simpson & Wu (2001), among others.

- (63) a. *gó gihn sāam*
 that CL shirt
 'that shirt/ the shirt'
- b. *ngóh ge/gihn sāam*
 I LNK/CL shirt
 'my shirt'
- c. *sān ge/gihn sāam*
 new LNK/CL shirt
 'new shirt'

I would like to draw attention to the fact that the property of the Determiner is realized not just in Cantonese Linkers and Classifiers, but also in English possessive and adjective phrases. Cantonese equivalents in (63a), (63b), and especially with an attributive adjective such as (63c) support this claim.

Possessive and associative phrases

In possessive and associative phrases, all the four East Asian languages² use the overt Linking morphemes, as in (64) and (65) (which is reproduced from (4) of Ch.1).

- (64) a. *ngóh ge chē* (Cantonese)
 I GEN car
- b. *wǒ de chē* (Mandarin)
 I GEN car
- c. *watashi no kuruma* (Japanese)
 I GEN car
- d. *na-eui chah* (Korean)
 I-GEN car
 'my car(s)'

²Whenever these four languages are compared, they will be presented in the following order: Cantonese, Mandarin, Japanese, and Korean, unless otherwise specified.

- (65) a. [_{PP} *hái máahloh*] **ge** *chāaiyàhn*
 [at road] LNK policeman
- b. [_{PP} *zài mǎlù-shàng*] **de** *jǐngcá*
 [at road-on] LNK policeman
- c. [_{PP} *michi manaka*] **no** *keisachu*
 [road center] LNK policeman
- d. [_{PP} *toro wi*] **-eui** *kyeongchal*
 [road top]-LNK policeman
 ‘policeman on the road’

Note that Korean uses morpheme *-eui* for the possessive and associative marking. I treat these possessive and associative morphemes differently from the other linking morphemes that are used in adjectives, and relative clauses. Semantically, the genitive phrases mostly have inalienable or kinship relationship with their head nouns. The genitive markers in the four East Asian languages in (66) = (5) show such characteristics; they are normally optional.³ Note that Korean is quite exceptional; use of genitive marker is not a default case.

- (66) a. *hohksāang (ge) fuhmóuh*
 student (GEN) parents
- b. *xúesheng (de) fùmǔ*
 student (GEN) parents
- c. *gakusei (no) ryoushin*
 student (GEN) parents
- d. *haksaeng(-eui) poomo*
 student(-GEN) parents
 ‘student’s parents’

In the kinship relationship construction such as (66), the modifying nouns (“students”) are read to be partitive to the head nouns (“parents”). English genitive marker

³These genitive markers are optional unless genitive pronouns are used, in which case no genitive is used. The constructions with pronouns are shown in §5.1.2.

of, as well as the clitic *s*, is also used with the partitive meaning in possessive and associative constructions:

- (67) a. *the model's hat* (possessive)
 b. *the hat of the model* (possessive)
 c. *the hat of the model* (associative) \Leftarrow "bridge"
 d. *the hat on the model* (associative)

When comparing (67b) and (67c), we can sense that the extended use of the possessive marker '*of*' is perceived as an associative marker. This is the bridging context for transition.⁴

Note that the associative marker *of* in (67c) naturally leads to (67d), gaining complexity in meaning. (67d), reproduced as (68a) below, can further be rewritten as (68b) or (68c).

- (68) a. *the hat on the model*
 b. *the hat which the model is wearing*
 c. *the hat that the model is wearing*

Thus, note the two developmental pathways of 'associative':

- (69) possessive \rightarrow associative \rightarrow partitive
 associative \rightarrow attributive

⁴Givon (2001) points out that English prepositions are grammaticalized with their own pathways. One such example is (α).

- (α) a. *in the middle of the garden*
 b. *under the table*

While the use of linker *of* is obligatory in (α -a), *of* as a linker does not appear in (α -b).

Although there is a big gap in these two possible interpretations for associative – one as ‘partitive’ as in (67b) and the other as ‘attributive’ as in (68b), an associative marker plays a major role in facilitating the usage of the attributives and relative clauses, which we are going to examine next.

Attributives and RCs

We have just seen that the East Asian nominalizers functioning as linking morphemes are generally overtly realized in genitive and associative expressions. However, as the relationship between the modifying expression and the head noun gets complicated, (i.e. as it becomes more attributive in meaning) we notice some changes in the nominalizing systems. First of all, the Japanese nominalizer morpheme *no* (as a linker) does not appear, and the Korean linking morpheme is changed into *-n* instead of *-eui* in adjective phrases such as (70), where the modifying expressions are attributive rather than partitive.

- (70) a. *hùhng ge sāigwāa* (Cantonese)
 red LNK watermelon
- b. *hóng de xīguā* (Mandarin)
 red LNK watermelon
- c. *akai suika* (Japanese)
 red watermelon
- d. *ppalgah-n soobak* (Korean)
 red-LNK watermelon
 ‘(a/the) red watermelon’

In restrictive relative clauses (71), we see the same phenomenon.

- (71) a. *sīk ngóh ge yàhn*
 know I LNK person (from Matthews & Yip 1996:110)

- b. *rènshi wǒ de rén*
 know I LNK person
- c. *watashi-ga shite-iru hito*
 I-NOM know-PROG person
- d. *na-reul a-neu-n sahram*
 I-ACC know-NPast-LNK person
 '(a/the) person who/ that knows me'

We have observed a subtle difference in the two types of linking morphemes in the four East Asian languages. As in (64) and (65), when the modifying expression involves a close relationship, they use *ge*, *de*, *no*, and *-eui*, whereas when the relationship between the modifier and the head noun is more distant or alienable, they use *ge*, *de*, ϕ , and *-n*, as in (70) and (71).⁵ The difference between these two types of linking morphemes is clear in Japanese and Korean. Cantonese *ge* and Mandarin *de*, on the other hand, have one form to represent two different types of linkers. However, the two types of linking morphemes are still in the same category of "Type I determiners." In the next section, we will examine the second type of determiners, that is, pronominals.

5.1.2 Type II Determiners: Pronominals

In this section, I am going to highlight another common characteristic of some East Asian nominalizers, Cantonese *ge*, Mandarin *de*, Japanese *no*, and Korean *-eui geot* and *-n geot*. I'd like to argue that when *ge*, *de*, and *no* are used as Pronominals (from a Genitive Pronominal to a Sentential Pronominal), their actual forms are [(ϕ) + Pronominal], where ϕ refers to empty linking morpheme. Korean provides supporting evidence for this analysis. Recall that Korean adnominal morpheme *-eui/ -n* and bound noun *geot* as a whole should be viewed as an equivalent form of *ge*, *de*, and *no* in pronominal

⁵Japanese uses *-i* and *-na* endings for attributive adjectives.

constructions. When they are used as Pronominals, the four East Asian nominalizers *ge*, *de*, *no*, and *(-eui/-n) geot* belong to another type of determiner. Whereas the Type I determiners have only linking functions with partitive or attributive meaning to the head noun, the Type II determiners have both modifying and nominalizing functions in one form, except Korean *-eui/-n geot*.

While Korean makes a clear distinction between *-eui/-n* as linker and *geot* as pronominal, the pronominal forms for all four languages can be compared to the English indefinite pronoun *one*.⁶

I *reject* the view that *ge*, *de*, *no* in (72) are to be analyzed as Linking morphemes followed by null nouns, as in (73).

- (72) a. *ngóh ge* (Cantonese)
I one
- b. *wǒ de* (Mandarin)
I one
- c. *watashi no* (Japanese)
I one
- d. *na-eui geot* (Korean)
I-GEN one
'mine/ my stuff'

- (73) (i) *ngóh ge* ϕ
- (ii) *wǒ de* ϕ
- (iii) *watashi no* ϕ

⁶Panagiotiidis (2003:382), who treats *one* as an empty noun, argues that the meaning of such empty noun should be underspecified somewhere in the expression, whether it is a phonologically null noun or a semantically empty noun like English *one*. So, both phonologically empty noun e_N or descriptive noun *ones* in 'As for loudspeakers, these are the most reliable e_N /ones' are acceptable, provided that e_N is supposedly properly licensed and identified.

Instead of the analysis in (73), I propose that when used as pronominals, linking morphemes *ge*, *de*, and *no* are incorporated to their pronominals. This can be compared to (72d). Such claim can further support the hypothesis that Determiners embrace lexical and functional forms together, and the basic function of Determiners is to specify with definiteness.

The same analysis as above applies to the Pronominal *ge*, *de*, *no*, and *(-n) geot*. Thus, if we view these as morphemes whose Pronominal functions are focused, the recruitment of different Linking morphemes in Korean (using *-n* but not *-eui*) is not a problem.

Recall that Japanese *no* follows pre-nominal modifiers in headless RCs as in (74c), and it is not used in headed RCs. This phenomenon can provide another supporting evidence that the linking morphemes are incorporated to pronominal usage.

- (74) a. *kàhmyaht ngóh máaih gó-go*
 yesterday I buy DEM-CL
- b. *zuótiān wǒ mǎi de*
 yesterday I buy DE
- c. *kinou watashi-ga kat-ta no*
 yesterday I-NOM buy-Past NO
- d. *eoje nae-ga sa-n geot*
 yesterday I-NOM buy-ADN:Past GEOT
 'the thing I bought yesterday'

Note the replacement of *ge* with *gó-go* [Demonstrative + Classifier] in Cantonese, which was introduced in §4.1.3. The construction *gó-go* is preferred probably because 'yesterday' induces definiteness and singularity. If you use *nī sahp nihh lèih* 'these 10 years' instead of *kàhmyaht* 'yesterday', you would expect *ge* rather than *gó go*, since a long period would induce indefiniteness.

Another type of these four nominalizers as Sentential Pronominals is Free Relative Clause construction. Unlike the case in a propositional clause as above, Cantonese and Mandarin S-pronominals allow this structure, because we can trace back the semantic head noun outside the noun modifying phrase as in (75).

- (75) a. [*Ngóh jeui séung-yiu ge*] *haih gihnōng*
 [I most want GE] be health
- b. [*Wǒ zùì xǎng-yào de*] *shì jìankāng*
 [I most want DE] be health
- c. [*Watashi-ga mottomo hossuru koto*]-*wa genko-desu*
 [I-NOM most want-ADN:Pres GEOT]-TOP health-COP+DEC
- d. [*Nae-ga kajang wonha-neun geot*]-*eun keongang-i-da*
 [I-NOM most want-ADN:Pres GEOT]-TOP health-COP-DEC
 ‘What I want most is health’

Matthews and Yip (1996:113) regard the Cantonese construction as in (75a) as “free” in the sense that what the clause ([*Ngóh zeuih séung-yiuh ge*] ‘what I want most’) refers to is left unspecified. Although the referents are not as clearly realized as in the other types of S-Pronominal, the referents are understood in the given contexts, and they are quite nominal like “thing”.

I believe these four East Asian nominalizers serve as strong evidence to support one of the major hypotheses of this thesis – the linking morphemes (possessive, associative, adjective markers and relativizers) and pronominals form two types of determiners, and they distribute their functions with the same phonological forms in Cantonese, Mandarin, and Japanese, but they are well distinguished in Korean. In the next section, we will see that their extended functions such as Complementizers or Stance markers are facilitated by these Sentential Pronominals.

5.2 Nominalized complementation in Japanese and Korean

We have just seen that Mandarin *de* and Cantonese *ge* as Sentential Pronominals cannot go further to work as Complementizers, e.g. appearing in object position in the matrix clause. In the case of Japanese *no* and Korean *geot*, however, we find that they also occur at the end of whole clauses that are interpreted as events or propositions. Because of this, *no* and *geot* are usually termed as Complementizer. I claim that these two Sentential Pronominals do not always work as Complementizers.

I reproduce the Korean example (20) as (76) here, where the nominalizer *-n geot* serves as a Complementizer.

- (76) *Na-neun harabeoji-ga choomoosi-neu-n geos-eul ar-ass-da*
 I-TOP grandfather-NOM sleep:HON-NPast-LNK GEOT-ACC know-Past-DEC
 'I knew that grandfather was sleeping' (Kim 1997: 392)

It is natural in Korean (and also in Japanese) to replace the matrix verb in (76) by perception verbs, such as "see" or "hear" as in (77), which is recalled from (21).

- (77) *Na-neun harabeoji-ga choomoosi-neu-n geos-eul po-ass-da*
 I-TOP grandfather-NOM sleep:HON-NPast-LNK GEOT-ACC see-Past-DEC
 'I saw grandfather sleeping'

Since the scope that *geot* refers to is a proposition as in (76) and (21), and since *geot* can be replaced by nouns such as *sashil* '(the) fact', Sohn (1999:312) refers to structures with *geot* as a defective noun to "the fact-S type clauses."

Japanese *no* and Korean *geot* as S-pronominals appear to be crucial for marking as Complementizer, due to their head-final word order. Now I want to explain that

there is another piece of evidence for this word order factor: the Internally-headed Relative Clause (IHRC) constructions in Japanese and Korean are the forms extended from Complementizer usage of *no* and *-n geot* for marking sentential pronominals. The IHRC constructions have the relativized (or modified) NP inside the RC, and a functional N (lexically non-determinate N) outside the RC. This structure is always viewed to be peculiar, as the relative head is not raised to Spec of CP, but it bears the Case assigned within the relative clause.

To fill the empty subject or object position (or many other positions as argued by Sohn 1999)), the matrix clause need a “functional” NP/DP. This structure is well illustrated in Korean, as in (79), compared to the normal counterpart as shown in (78).

(78) [*eoje* t_i *po*]-*n* *yeonghwa*_i
 [yesterday *t* watch]-REL:Past movie
 ‘the movie that (I) watched’

(79) [*eoje* *yeonghwa po*]-*n* *geot*
 [yesterday movie watch]-REL:Past GEOT
 ‘the movie that (I) watched’

The structure of normal type Korean RC (78) resembles that of an English restrictive RC, despite the fact that Korean places RC pre-nominally, following the SOV word order. In (79), what is overtly expressed is the co-referent of the the modified head noun *yeonghwa* “movie”. This co-referent (i.e. also *yeonghwa*) is RC-internal. The head noun that is being modified by NP/DP is realized as “functional” (or general) noun, namely *geot*, and it is RC-external. In other words, *geot* acts as a functional head to fill the gap for the lexical head *yeonghwa*.

Thus, I argue that the IHRC structures in Japanese and Korean are the occasion where the empty head noun *no* and *geot* are over-used in SOV word order.

Keenan (1985) provides some support for this claim about the relationship between word order and relativization. He claims that the languages with pre-nominal RCs, which are mostly verb-final languages, tend to construct other forms of relativization. So, IHRC has also drawn a lot of interest from researchers in Transformational-Generative grammar.

Compare the Korean and Cantonese examples below. As shown in (80), Korean allows a normal restrictive RC construction with head-internal NP as in (80a) and an IHRC constructions with head-external NP as in (80b)

- (80) a. *igeos-eun [cheone nae-ga t_i cheongrihaedoo-n moonseo-deul_i]-i-ya*
 this-TOP [before I-NOM *t* file-REL:Past document-PL]-be-Dec
 'These are the documents which I filed before' (source clause)
- b. *igeos-eun [cheone nae-ga moonseo-deul cheongrihaedoo-n*
 This-TOP [before I-NOM document-PL file-REL:Past
geot]-*(i)*-ya
 GEOT]-be-Dec
 *'These are the things which I filed the documents before' (Korean)

Strictly speaking, there are two head nouns in (80b), i.e. the internal head *moonseo-deul* 'documents' and the external head *geot* 'thing'. I argue that such structures in Korean and Japanese are the result of extending the usage of sentential pronominals, as diagrammed in Table 5.2.

In the case of Cantonese and Mandarin, the extension of sentential pronominal usage is avoided unless there is a copula. Thus, IHRC structures are not allowed, as in the Cantonese examples in (81b).

- (81) a. *māi haih [ngóh jīcīhn jīngléih-gwóh gódi/ge mǎhngín]*
 these COP [I before file-Asp that-CL/GE documents]
 'These are the documents which I filed before' (source clause)
- b. **māi mǎhngín jauhhaih [ngóh jīcīhn jīngléih-gwóh gódi/ge]*
 these documents COP [I before file-Asp that-CL/GE]

Table 5.1: IHRC constructions extended from S-Pronominals

Japanese <i>no</i>	S-Pronominal (headless RC + <i>no</i>)	→	IHRC (headed RC + <i>no</i>)
		→	Complementizer (Small Clause + <i>no</i>)
Korean <i>-n geot</i>	S-Pronominal (headless RC + <i>-n geot</i>)	→	IHRC (headed RC + <i>-n geot</i>)
		→	Complementizer (Small Clause + <i>-n geot</i>)
Cantonese <i>ge</i>	S-Pronominal (headless RC + <i>ge</i>)	x	IHRC (headed RC + <i>ge</i>)
		x	Complementizer (Small Clause + <i>ge</i>)
Mandarin <i>de</i>	S-Pronominal (headless RC + <i>de</i>)	x	IHRC (headed RC + <i>de</i>)
		x	Complementizer (Small Clause + <i>de</i>)

‘These documents are the ones which I filed before’

The restrictions on Cantonese *ge* and Mandarin *de* functioning as Sentential Pronominals are highlighted in Table 5.1. The form ‘S[..*t_i..]PRON’ represents headless RC structures, and ‘what-S’ represents Free RC structures. Also note that Japanese uses *koto* ‘thing’ as the nominalizer in the free RC construction and the propositional clause.*

Table 5.2: Some restrictions on *ge* and *de* as S-pronominal

Types	S-PRON with referential N		Event	Propositional
	‘S[.. <i>t_i..]PRON’</i>	‘what-S’	‘-ing’	‘that-S’
Japanese <i>no</i>	✓	<i>koto</i>	✓	<i>koto</i>
Korean <i>-n geot</i>	✓	✓	✓	✓
Cantonese <i>ge</i>	✓	✓	x	x
Mandarin <i>de</i>	✓	✓	x	x

The table 5.1 and the examples above reveal that that Chinese do have Sentential pronominals, using Cantonese *ge* and Mandarin *de*, but only in restrictive RC-types, where the restrictiveness comes from the previous or given contexts. I assume that such restrictions are the results of their SVO word orders, for nominalizing “event” or

“proposition” requires sentential pronominals even in Mandarin and Cantonese. Their basic SVO word order and pre-nominal modification structures clash for such complementization. In other words, as we see in a ‘SV [small clause + S-pronominal]’ structure, S-pronominal marking as complementizer becomes redundant.

An event is mostly likely compared to the gerundive in English, such as *I like [skating/ cooking]* or *I saw him [driving]*, and a proposition to the ‘that’-clause, such as *We know [that they are out of the town]* or *[That I finished the writing] is amazing*. In Cantonese and Mandarin, both of these structures are barred from being used with S-pronominal *ge* (or its equivalent *gó-go*) and *de*, as in (82).

- (82) a. * *Kéuih jī* [*ngóhdeih jōu ngūk ge/gó-go*]
 s/he know [we rent house GE/DEM-CL]
- b. * *Tà zhīdào* [*wǒmen jū fángzi de*]
 s/he know [we rent house DE]
- c. *Kare-wa* [*watashi.tachi-ga uchi-o kari-ta no*]-o *suru*
 s/he-TOP [we-NOM house-ACC get-Past NO]-ACC know+DEC
- d. *Keu-neun* [*woori-ga jip kooha-n geos*]-eul *an-da*
 s/he-TOP [we-NOM house get-LNK:Past GEOT]-ACC know-DEC
 ‘S/he knows that we have rented a house’

The ungrammatical structure of Cantonese in (82a) becomes acceptable with the factive noun such as *shi* ‘matter’ as in (83).

- (83) *Kéuih jī ngóhdeih jōu ngūk ge sih*
 s/he know our rent house GE matter
 ‘S/he knows the matter concerning our renting a house’ (Law 1995)

Thus, *ge* does not seem to serve as a sentential nominalizer or complementizer by itself. However, the next example (84b) exhibits some possibility of using *ge* after the clausal object, although the tone change (from *ge* to *gé*) and the meaning change (it

only gets stance reading) should follow.

- (84) a. **Kéuih jī ngóhdeih jōu ngūk ge*
 s/he know we rent house GE
 b. *Kéuih jī ngóhdeih jōu ngūk gé*
 s/he know we rent house GE
 ‘S/he knows that we have rented a house (I assure of it)’

Meanwhile, Mandarin *de* exhibits less possibility for such usage, being restricted as a relativizer as in (85).

- (85) *Tà zhīdào wǒmen jū de fángzi*
 s/he know we rent DE house
 ‘S/he knows that we have rented a house’
 (Lit.) ‘S/he knows the house that we have rented’

In this section, I have shown that all the four East Asian nominalizers have properties of being Sentential Pronominals. I attempted to answer why Cantonese and Mandarin are much more restricted with regard to the use of Sentential Nominalizers in complement clauses, while Japanese and Korean use them freely and even extend their usage into other constructions such as IHRCs. I focused on figuring out whether it is due to the word order difference. Assuming that such incompatibilities come from word order differences, I conclude that Chinese does not recruit overt nominalizers owing to the economy caused by their SVO structures in main clauses. The major clues for this claim are given by the referents in Cantonese and Mandarin; these two Chinese languages can form Sentential Pronominals (which are regarded as Complementizers by the Generative linguists) when their referents can be recovered in the previous contexts or discourse contexts.

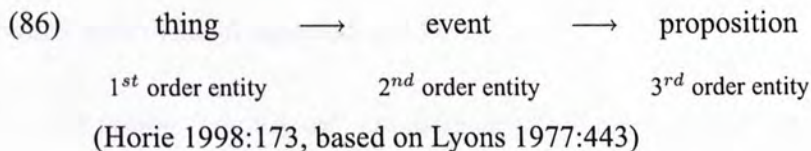
5.3 Further extension to Cleft and Stance

Sentential pronominals *ge*, *de*, *no*, and *-n geot* also play a role for cleft/focused constructions and even for stance marking. However, we still observe some linguistic quandaries in their statuses. Firstly, in the case of Cantonese and Mandarin, it is not straightforward to distinguish cleft and stance reading. Secondly, Japanese and Korean do not even distinguish among Sentential nominalizers, Cleft, and Stance. It is because they use the same structures ‘adnominal (*no* and *-n geot*) + copula’ for all these three constructions.

5.3.1 Unidirectional pathway view

Throughout the thesis, I have been particularly concerned with the cross-linguistic comparison of some adnominal and nominalizing morphemes. I wish to add a diachronic perspective on these morphemes.

Lyons (1977)’s semantic division of ontological entities provides a useful framework for the diachronic analysis of the multi-functional nominalizers in East Asian languages. According to Lyons, the ontological entities can be roughly grouped into three major categories and language users can expand the scope of the meaning as shown in (86).



In the spirit of Lyons, Horie (1998) and Yap et al. (2004) argue for the unidirectional development of Japanese *no*. Yap and colleagues further attempted to include Mandarin *de* and Malay (*em*)*punya* for grouping among the East and South-East Asian

Figure 5.1: “(Ontological) Unidirectionality” – based on Yap et al. (2004)

Japanese	NP <i>no</i> NP	→	→	→	S <i>no</i> ϕ	→	S <i>no</i>
	NP <i>no</i> ϕ				(headless RC)		(Complementizer) (Cleft/ Stance)
Mandarin	NP <i>de</i> NP	↔	NP <i>de</i> ϕ	↔	S <i>de</i> ϕ	→	<i>shi</i> S <i>de</i> → S <i>de</i>
					(S-pronominal) or (headless RC)		(Cleft) (Stance)
					↓		
					S <i>de</i> NP		
Malay	NP <i>punya</i> NP	→	NP <i>punya</i> ϕ	→	S <i>punya</i> ϕ	→	S <i>punya</i>
					(S-pronominal)		(Cleft/Stance)

nominalizers which share a similar range of functions and a similar ontological developmental pathway, i.e. from referential domain to evidential domain. They claim for a semantic constraint in the grammaticalization of the adnominal morphemes along the same line as Lyons’ distinction in (86). Figure 5.1 summarizes their claim.

It can be helpful to understand that Japanese *no* and Malay (*em*)*punya* show the unidirectional pathway from genitive marker to genitive pronominal. If this pathway is logical enough, it becomes natural for more established Pronominals (Sentential Pronominals) to develop into functional markers such as Stance markers. Mandarin *de* exhibits a similar range of functions, but while maintaining a similar contiguity of functions from an ontological perspective, the diachronic records do not completely match with those of Japanese and Malay.

The notion “ontological” unidirectionality is made popular due to the effort of handling the inconsistency shown in the former part of the directions (in Figure 5.1). The figure also shows that the development of the pathways on the latter part (from S-Pronominal → Cleft → Stance) is clearly unidirectional. In this section, I focus on the latter paths of development in some East Asian nominalizers, addressing the

unidirectionality issue.

5.3.2 Sentential pronominal to Cleft construction

The nominalized clause with Copula is well-known as Focus or Cleft construction. The four East Asian languages all use their nominalizers in such construction, but due to their word-order differences, the status of each adnominal is controversial. For instance, Cantonese *ge* in such construction is regarded as Complementizer,⁷ while the status of *(-n) geot* in Korean in the same construction is viewed either as Complementizer or as Nominalizer.

In Cantonese and Mandarin, the copula is omissible and this gives rise to controversy whether this construction should be taken as Cleft construction, or normal affirmative construction with Sentence Final Particles. Consider:

- (87) a. *Kéuih (haih) kàhmyaht làih ge*
s/he (COP) yesterday come GE
- b. *Tā (shì) zuótiān lái de*
s/he (COP) yesterday come DE
- c. *Kare-wa kinoo kita no desu*
he-TOP yesterday came NO COP+DEC
- d. *Keu-neun eoje o-n geo-ya*
he-TOP yesterday come-LNK:PAST GEOT-COP+DEC
'(i) It was yesterday that he came'/
'(ii) He came yesterday (I'm sure of it)'

For all four nominalizers, I follow the unidirectionality accounts on the possible

⁷See Law (1995) and Fung (2000). In this thesis, however, I have restricted the use of the term 'Complementizer' to the nominalizing morpheme in constructions similar to English *that*-clauses in sentences such as *I know/think/saw + that*-clause.

pathways from Sentential Pronominal → Cleft (e.g. Japanese *no* by Horie (1998)) and from Sentential Pronominal → Cleft → Stance (e.g. Japanese *no*, Cantonese *ge*, and Mandarin *de* by Yap et al. (2004); Korean *geot* by Park (1999)). The following sets of examples are arranged according to the developmental pathways – (88) shows the usage of the four nominalizers as sentential nominalizers; (89) shows the bridging contexts where the status of the nominalizers is controversial; and finally (90) gets to emphasize the stance reading.

- (88) a. *Kéuih góng ge Seuhnghói-wá*
s/he speak GE Shanghainese
- b. *Tā shuō de Shànghǎi-huà*
s/he speak DE Shanghainese (from Zhu 1978:149)
- c. *Kare-ga hanasu no-wa 'Shanghai'go-desu*
he-NOM speak NO-TOP Shanghainese-COP+DEC
- d. *Keu-ga malha-neun geos-eun Shanghai.eo-ya*
he-NOM speak-ADN:NPast GEOT-TOP Shanghainese-COP+DEC
'The language he speaks is Shanghainese'
- (89) a. *Kéuih góng ge haih Seuhnghói-wá*
s/he speak GE COP Shanghainese
- b. *Tā shuō de shì Shànghǎi-huà*
s/he speak DE COP Shanghainese (from Zhu 1978:149)
- c. *Kare-ga hanasu no-wa 'Shanghai'go-desu*
he-NOM speak NO-TOP Shanghainese-COP+DEC
- d. *Keu-ga malha-neun geos-eun Shanghai.eo-ya*
he-NOM speak-ADN:NPast GEOT-TOP Shanghainese-COP+DEC
(i) 'The language he speaks is Shanghainese'
(ii) 'It is Shanghainese that he speaks'
- (90) a. *Kéuih haih góng Seuhnghói-wá ge*
s/he COP speak Shanghainese GE

- b. *Tā shì shuō Shànghǎi-huà de*
s/he COP speak Shanghainese DE (from Zhu 1978:149)
- c. *Kare-wa 'Shanghai'go-o hanasu no-desu*
he-TOP Shanghainese-ACC speak NO-COP+DEC
- d. *Keu-neun Shanghai.eo-reul malha-neun geo-ya*
he-TOP Shanghainese-ACC speak-ADN:NPast GEOT-COP+DEC
- (i) 'It is Shanghainese that he speaks'/
- (ii) '(I assure that) he speaks Shanghainese'

Clearly, cleft constructions, particularly those of Cantonese and Mandarin Chinese, reveal that Cantonese *ge* and Mandarin *de* can actually function as sentential pronominals (or zero complementizers). These two S-pronominals are not blocked from appearing, especially with the assistance of copular verbs (*haih* in Cantonese, and *shì* in Mandarin). The existence of the copula renders a nominal (and in this case a nominalized clause) to have a sense of "focus" or "emphasis." Since the main verb is copula, even the SVO-type languages like Chinese tend to use an overt pronominal for the modifying clause.

5.3.3 Cleft to stance

In this section I extend the transition from sentential pronominal to cleft, and continue to the next step of the development of nominalizers from Cleft to stance.

Even without the assistance of copular verbs, sentences in (91) (= (87)) are still ambiguous whether they are Cleft constructions or sentences with stance markers.

- (91) a. *Kéuih (haih) kàhmyaht làih ge*
s/he (COP) yesterday come GE
- b. *Tā (shì) zuótiān lái de*
s/he (COP) yesterday come DE (from Li & Thompson 1981:589)

- c. *Kare-wa kinoo kita no desu*
 he-TOP yesterday came NO COP+DEC
- d. *Keu-neun eoje o-n geo-ya*
 he-TOP yesterday come-LNK:PAST GEOT-COP+DEC
 'It was yesterday that he came/ The situation is that he came yesterday.'

Stance reading is more established in (92) below. This structure is not controversial in terms of a stance reading, as it has a more expressive or emphatic reading than the typical affirmative sentence. Also, the time used is non-past or future.

- (92) a. *Ngóh yiu heui Méihgwok ge*
 I need go America GE (from Fung 2000)
- b. *Wǒ yào qù Měiguó de*
 I need go America DE
- c. *Watashi-ga amerika-e ika-na.kereba.naranai no*
 I-NOM America-to go-have.to-NPast NO
- d. *Nae-ga migook-e ka-ya.han-da-neu-n geo-ya*
 I-NOM America-to go-have.to-DEC-NPast-LNK GEOT-COP+DEC
 '(The fact is) I need to go to America'

In previous sections we have drawn detailed descriptions about the complexity of the four East Asian nominalizers. They basically share the multiple functions (Linkers, Pronominals, and Sentential Pronominals) within the basically same pre-nominal modification structures. On the other hand, we have seen that they do not share some functions; Japanese and Korean extend sentential nominalizing functions to complementizers, but this does not happen in Cantonese and Mandarin due to their word order differences. The sentence final particles are thus the only grammaticalized (and pragmaticized) forms to have extended from the nominalizers for all four languages. To have assertive stance, these languages recruit other Sentence Final Particles (SFPs), rather than *ge*, *de*, *no*, and *-n geot*.

5.4 Tense/Aspect reflected on Adnominal systems

In analyzing these East Asian nominalizers, the matter about the relationship with time is another challenging part. One interesting questions, for example, is why tense or aspectual values are realized in the Korean adnominal morphemes, but not in those of the other East Asian nominalizers? Although previous studies have focused on the adnominal systems of individual languages, cross-linguistic comparison has been lacking. Especially in Chinese, the so-called “tense-less language,” it is not easy to capture the tense/aspect system within one adnominal morpheme. In the following I attempt to raise the questions concerning this complicated topic and give preliminary solutions to some of them. I believe that this topic deserves a far deeper analysis.

5.4.1 Spell-outs of time in Korean linking morphemes

In §2.1.1, I introduced the peculiar characteristics of the Korean nominalizing system, i.e. the Linking morphemes also mark tense/aspect. This phenomenon is not visible in the other three languages. Here we compare this phenomenon to Cantonese *ge*, Mandarin *de*, and Japanese *no*.⁸ I first introduce the relevant details about the Korean tense/aspect system.

Korean nominalizers also indicate the relative tense of the embedded clause. Yang (1972:237) classifies the three Linking morphemes that have relationship with time as shown in Table 5.2.

Essentially, *-n* is associated with past time, as in (93a); *-neun* with present time (or speech time), as in (93b); and *-l* with future time, as in (93c).⁹

⁸See Simpson & Wu (1998) where they argue that Mandarin *de* is evolving into a past tense marker.

⁹‘Tembedded’ refers to the tense of the embedded clause, while ‘Tmatrix’ refers to tense of the matrix clause. See Lee (1991) and Lee (1995) for more controversial issues.

Table 5.3: Korean Linking morphemes referring to time (Yang 1972)

Linking morpheme (=RC suffix)	Relative tense of RC
<i>-n</i>	Embedded > Tmatrix
<i>-neun</i>	Embedded = Tmatrix
<i>-l</i>	Embedded < Tmatrix

- (93) a. *kongbooha-n saram*
 study-ADN:Past person
 ‘(a/the) person who (has) studied’
- b. *kongbooha-neun saram*
 study-ADN:Pres person
 ‘(a/the) person who is studying’
- c. *kongbooha-l saram*
 study-ADN:Fut person
 ‘(a/the) person who is going to study’

Note that tense/aspect in Korean is interpreted from the context. Therefore, the past tense realized in (93a) can also be interpreted as “perfective,” present tense in (93b) as “(progressive) imperfective,” and future tense in (93c) as “infinitive.” As briefly mentioned in §2.1.1, Lee (1993) points out the Linkers are also related with realis/irrealis distinction. See Table 5.3 below:¹⁰

Table 5.4: The temporal system of attributive clauses (based on Lee 1993)

Realis/Irrealis distinction	Form
(Past) Perfective	$\phi + -n$
Non-past imperfective	$-neu- + -n$
Imperfective	$-l + \phi$

¹⁰Lee (ibid.) introduces one more attributive form, the past imperfective *teon* which is analyzed as *teo* + and linker *-n*, and explains that this attributive represents the aspect that is ongoing at some point prior to a reference point. Since *teo* has mood value, i.e. ‘retrospective’, I exclude this from the discussion.

As we have seen above, a relative clause in Korean is specified by a Linker *-n* which can also be interpreted as a complementizer. Since these Linkers are also used to specify tense, the syntactic analysis of this suffix becomes tricky.

5.4.2 Infinitival RC

Despite similar semantics between Free Relatives of English and IHRCs in Japanese and Korean, we need to obtain certain constraints on replacibility of gerundive form into Korean *geot*. Properties shown in this construction can also be compared to the structure like [*The man to see*] is *Fred*, classified in Keenan (1985:169) as the “infinitival relatives” in English. Cantonese *ge* and Mandarin *de* are used as Linking morphemes in complex NPs with the meaning of English *for* or *to*, or the pronominals whose meaning is “thing(s) for ...” or “thing(s) to be ...”, as in (94) and (95) respectively.

- (94) a. *sihk ge yéh*
 eat LNK thing
 ‘things for eating’ (from Matthews & Yip 1996:108)
- b. *bālā shì chī de*
 guava COP eat NMLZ
 ‘Guavas are to be eaten/ for eating’ (from Li & Thompson 1981:588)
- (95) *yuhng ge sihgaan*
 use GE time
 ‘the time to be used’ (from Matthews and Yip (1996:108))

Like Cantonese and Mandarin, Japanese and Korean nominalizers can be used as Linking morphemes in complex NPs with the meaning of *for* or *to*. Consider example (96) below.

- (96) a. *tabe-ta no* (Japanese)
eat-Past NMZ
- b. *meok-neu-n geot* (Korean)
eat-NPast-LNK NMLZ
'things for eating'

The time used in (96 a-b) above is as free as that of Cantonese and Mandarin. That is, referred time is context-dependent with such nominalized constructions in all these languages, although the Korean nominalizing system looks more complicated than the rest of the four East Asian languages.

5.5 Summary

In this chapter, we attempted to solve the puzzles of the four East Asian nominalizers arising from their dual properties as Linkers and Pronominals. These dual natures of nominalizers were realized through two types of determiners, as discussed in §5.1.

I have argued that the pre-nominal modification structures of the four East Asian languages allow their nominalizers *ge*, *de*, *no*, and *-n geot* to function as Sentential Pronominals. Sentential Pronominals are presented in various forms. Cantonese and Mandarin cannot use their nominalizers as sentential pronominals to refer to an event or a propositions, i.e. they do not occur as Complementizer, since such function is redundant in SVO word order. Japanese *no* and Korean *-n geot* on the other hand are recruited as Complementizers because of their head final word order.

Also, the changing statuses (i.e. grammaticalization of meaning and function) of *geot* show that, depending on whether it is used as a complementizer or a pronoun, the grammatical relations with various RCs can be revealed. Previous studies on RC constructions in these East Asian languages left a gap in that they fail to clearly identify the

grammatical relations between various RC constructions and the roles of the nominalizers. In this chapter, I provided a more comprehensive and more unified perspective on handling the nominalizers and various types of RC construction.

Chapter 6

Conclusion

We have noticed that the four East Asian languages have shared a great deal of functional properties. It was also observed that there are some differences and striking contrasts between Korean nominalizers stands out from the rest of the four East Asian languages, in that it can be teased out into the linking part of the post-nominal structure, not only in nominal domain such as Locative or Associative phrases, but also in adjectival domain such as Adjective phrases or Relative Clauses. This observation shows that these two distinct parts in Korean nominalizers are in a single functional domain of Mandarin *de* and Japanese *no*. In other words, the two post-nominal markers (linking and pronominalizing) are realized in one post-nominal functional domain in Korean and Japanese.

Unlike other Indo-European languages like English, Russian, and Italian, the languages all share pre-nominal modifying structures. The only language that does not have the head near is divided in these languages, that is, Chinese. Chinese nominalizers are in various functions, such as the linker of the post-nominal structure, the linker of the pre-nominal structure, and the pronominalizer. While Japanese and Korean use *no* and *ni* as linker of the pre-nominal structure, respectively, even employing them as linker of the post-nominal structure.

Chapter 6

Conclusion

We have noticed that the four East Asian nominalizers share a great deal of functional properties. It was also observed that there are some differences among each others. Korean nominalizers stands out from the rest of the four East Asian languages, in that it can be teased out into the linking part and the pronominal part: *-eui* and *geot* in nominal domain such as Genitive or Associative phrases, *-n* and *geot* in clausal domain such as Adjective phrases or Relative Clauses. Throughout the thesis, I have claimed that these two distinct parts in Korean nominalizers can be compared to Cantonese *ge*, Mandarin *de*, and Japanese *no*. In other words, the dual properties of nominalizers (linking and pronominalizing) are realized in one morpheme in Cantonese, Mandarin, and Japanese.

Unlike other Indo-European languages like English, these four East Asian languages all share pre-nominal modifying structures before the head noun. Thus, when the head noun is elided in these languages, their sentential pronominals can be used in various functions, such as the head of Free relative clauses and Complementizers. While Japanese and Korean use *no* and *-n geot* freely as several types of S-pronominals, even employing them in Internally-Headed RC constructions for empha-

sis of the referentiality of head noun, there are restrictions on such usages in Cantonese and Mandarin. I argued that this is owing to a functional redundancy in SVO word order.

I also provided an alternative view on the development of the nominalizers of these East Asian languages. When they function as pronominalizer, they yield the lexical meaning “(the) thing.” Meanwhile, when they work as linkers, the lexical meaning is greatly reduced, but it is indirectly realized, and conveys the sense “with the property of that (thing).” I adopted a grammaticalization account to support that using nominalizers as Cleft markers and Sentence Final Particles (SFPs) are the result of extension of pronominal uses into propositional and attitudinal contexts (often with emphatic or assertive nuances). Due to the *intangible* meaning of the pronouns, a nominalizer could be further used with abstract nouns, such as “fact,” “event,” “problem,” etc. In at least four East Asian languages – Cantonese, Mandarin, Japanese, and Korean – the nominalizers appear to have evolved into SFPs, since all these languages have clause-final pronominals/ nominalizers, and have productive SFP systems.

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