

On alternative constructions for the pronoun-retention strategy in Korean: A corpus and translation-based analysis*

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Lee, Jieun and Jonathon Lookadoo. 2020. On alternative constructions for the pronoun-retention strategy in Korean: A corpus and translation-based analysis. *Linguistic Research* 37(2), 217-266. This study explores how Korean deals with restrictions in relative clause (RC) formation. Keenan and Comrie's (1977) judgment that Korean is a language that uses the pronoun-retention strategy has had an enduring impact on later studies. However, it is highly doubtful that the pronoun-retention strategy is used in everyday situations, since in most cases an RC with a resumptive pronoun (RP) sounds unnatural in Korean. This observation suggests that there may be an alternative way to convey the function of an RC formed on a genitive NP (genitive RC). This suggestion should be tested with naturally occurring data. In this paper, therefore, genitive RCs with an RP (GRP) are investigated in the contemporary Korean corpus to discover to what extent they are in use. Simultaneously, a Korean-English parallel corpus and data from the Bible are examined to observe how English genitive RCs are expressed in their Korean counterparts. The findings show that GRPs are rarely used in Korean. Rather, Korean tends to paraphrase the genitive RC into a non-RC or a non-genitive RC to transfer the meaning of a genitive RC. (Seoul National University · Presbyterian University and Theological Seminary)

Keywords Korean, relative clause, pronoun-retention strategy, resumptive pronoun

1. Introduction

An RC construction consists of an RC and a head noun (Lehmann 1986; Song 2001; Dixon 2010). In the examples of an RC construction below, *the woman* and *Mary* are head nouns and *whom I met yesterday* is an RC.

* The authors would like to thank the two anonymous reviewers for their constructive and immensely helpful comments.

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- (1) *The woman whom I met yesterday is a poet.*
 (2) *Mary, whom I met yesterday, is a poet.*

An RC gives information about the head noun (Dixon 2010). In (1), the information given in the RC helps to narrow which woman the speaker has in mind, and in (2), it adds extra information about Mary, who should have already been identified (Mallinson and Blake 1981; Whaley 1997; Dixon 2010).

Whether an NP can be relativized or not is affected by the grammatical role of the head noun in the RC (Keenan and Comrie 1977; Maxwell 1979; Lehmann 1986; Comrie 1989; Croft 1990; Song 2001). This is well-illustrated in Keenan and Comrie's (1977) Accessibility Hierarchy (AH) given below.

- (3) Accessibility Hierarchy

SUB > DO > IO > OBL > GEN > OCOMP

N.B.: '>' = 'is more accessible to relativization than'; SUB = subject; DO = direct object; IO = indirect object; OBL = oblique; GEN = genitive; and OCOMP = object of comparison

The AH states that a subject position is easier to relativize than a direct object position, while the direct object position is easier to relativize than an indirect object position, and so on down the hierarchy. According to Keenan and Comrie (1977), every language has a way to relativize at least the subject position, which they refer to as the primary strategy. This primary strategy may stop at any point on the AH. If it does, the non-primary strategy may be used depending on the language.

Korean is mentioned as an example of a language that uses the non-primary strategy when the primary strategy stops (Tagashira 1972; Keenan and Comrie 1977; Song 1991, 2001, 2003; Yeon 2012). The primary strategy in Korean is the gap strategy, and an NP can be relativized with this strategy from the subject position to the oblique position. An example of the gap strategy is given below.¹

1 The abbreviations used in this paper are: ABL = ablative, ACC = accusative, ALL = allative, CAUS = causative, COM = comitative, CONVERB = converb marker, COP = copula, DAT = dative, DEC = declarative, DEF = definitive, F = Feminine, HON = honorific, IMP = imperative, IMPF = imperfective, INCL = inclusive, IRR = irrealis, LNK = linker, M = masculine, MDL =

- (4) a. *chayk-ul* *sa-Ø-n* *John*
 book-ACC buy-PFV-REL.REAL John
 'John, who bought the book'
- b. *John-i* *chayk-ul* *sa-ass-ta*
 John-NOM book-ACC buy-PST-DEC
 'John bought the book.'

According to Keenan and Comrie (1977), the primary strategy stops at the genitive position, and the pronoun-retention strategy, the non-primary strategy, is adopted for this position (see also Tagashira 1972; Song 1991, 2003; Yeon 2012). In the pronoun-retention strategy a personal pronoun which is coreferential with the head noun is provided or retained in the RC. The remaining pronoun is called a resumptive pronoun (RP). Without the RP, the RC turns out to be ungrammatical.

- (5) a. **(caki-uy)* *kay-ka* *chongnyengha-n* *John*
 self-GEN dog-NOM smart-REL.REAL John
 'John, whose dog is smart'
- b. *John-uy* *kay-ka* *chongnyengha-Ø-ta*
 John-GEN dog-NOM smart-PRS-DEC
 'John's dog is smart.'

In (5a), the head noun takes a genitive role in the RC as in (5b) and appears as the reflexive pronoun *caki* 'self' along with the genitive particle *-uy* 'of'. The reflexive pronoun *caki* 'self' functions as an RP in (5a). Without the RP, (5a) turns out to be ungrammatical.

However, (5a) sounds awkward to most Korean speakers, and it is this observation that provides the focus of this article. Because it is unnatural, it is doubtful that RCs like the one in (5) are used in Korean speakers' daily lives.

Despite the unnaturalness of the Korean genitive RC given in (4), studies

modal suffix, NEG = negative, NEUT = neuter gender, NOM = nominative, NOML = nominalizer, OBL = oblique, PF = perfective, PL = plural, PST = past, PURP = purpose, REAL = realis, REL = relativizer, SG = singular, TOP = topic, QUOT = quotative, QUOTVERB = quotative verb, 1 = first person, 3 = third person.

have not thoroughly explored how the meaning/function of a Korean genitive RC is expressed in practice. Relativizing a genitive NP is explored in Korean linguistics by Song (1991, 2003), M.-G. Kim (2010), and J.-H. Yeon (2012). Song (1991, 2003) and J.-H. Yeon (2012) mention that a genitive NP can be relativized with the pronoun-retention strategy, but the examples of GRPs in their studies are contrived. M.-G. Kim (2010) argues that a genitive NP can be relativized only if it is promoted into a subject or an object position, but he does not describe how a genitive NP may be relativized when it cannot be promoted. Within English-Korean translation studies, Y.-O. Lee (2004) as well as J.-S. Choi and K.-S. Park (2009) examine how to translate English genitive RCs into Korean. However, Y.-O. Lee (2004) makes her suggestion without the benefit of naturally occurring data, while J.-S. Choi and K.-S. Park (2009) work with a data set that includes only 16 examples of genitive RCs. More thorough research based on naturally occurring data remains to be done regarding how Korean deals with restrictions in RC formation.

To fill this gap, we have two aims in this study. First, we examine whether a genitive RC with an RP (GRP) appears in the naturally occurring data. For this purpose, we search GRPs with the Korean National Corpus and the Korean Bible. Second, we investigate whether there is an uncontrived way to express the meaning/function of a genitive RC. In order to know what construction Korean uses for the meaning/function of a GRP, we examine how English is translated into Korean. Since English is a language where genitive NPs can readily be relativized, examining the Korean correspondence to English examples with genitive RCs will give us a chance to see how the meaning/function of GRPs is dealt with in Korean.

The article will be divided into three parts. First, we will introduce the data resources and how the target data was collected and processed. Next, we will describe the retrieved data. Finally, we will analyze and discuss the data.

2. Data resources

2.1 The corpus: the Korean National Corpus

This paper utilized the Korean National Corpus (KNC). Within the KNC, we searched the Contemporary Korean Corpus and the Korean-English Parallel Corpus. More specifically, we used the Contemporary Korean Written and Spoken Part-of-Speech tagged (POS-tagged) Corpora (see Tables 1 and 2 respectively) and the Korean-English Parallel POS-tagged Corpus (see Table 3).

Table 1: The composition of the Contemporary Korean Written POS-tagged Corpus

The written corpus	Number of files	Number of words
Broadsheet newspapers	89	2,732,791
Academic prose	100	3,982,933
Fiction	61	2,404,639
Non-academic prose (non-fiction)	24	787,382
Non-printed essays	4	158,977
Total	278	10,066,722

Table 2: The composition of the Contemporary Korean Spoken POS-tagged Corpus

The spoken corpus	Number of files	Number of words
Face-to-face conversation	88	413,705
Telephone conversation	8	13,325
Discussion/meeting	6	39,675
Spontaneous monologue	48	123,111
Speeches & lectures	49	202,271
TV broadcasts	1	13,559
Total	200	805,646

Table 3: The composition of the Korean-English Parallel POS-tagged Corpus

Korean-English Genre	Number of files	Number of words		
		Korean	English	Total
Social & diplomatic	60	68,808	112,136	181,004
Educational material:	10	80,977	124,056	205,043
General topics				
Novels	6	26,901	30,737	57,644
Miscellaneous	5	22,361	43,214	65,580
Social & general	5	7,927	13,589	21,521
Social & economic	1	2,831	6,260	9,092
Educational material:	1	5,483	7,468	12,952
Text books				
Total	88	215,288	337,460	552,836

2.2 The Bible: Korean and English versions

As will become evident in the essay, few GRPs are found in the Korean corpora. Korean and English versions of the Bible, have been examined in order to expand the amount of data on which to base linguistic judgments. The decision to compare Korean and English versions of the Bible was made with full awareness of the limitations in style that can result from such a comparison. However, two reasons for incorporating data from Korean and English Bible translations ultimately outweigh this concern. First, ancient Hebrew and ancient Greek are languages that use the pronoun-retention strategy (Keenan & Comrie 1977). We thus anticipated that more GRPs could be found in translations of the Bible. This leads to the second reason. Exploring Korean and English translations of the Bible allows for the possibility of expanding the number of GRPs incorporated into this study. It will of course be necessary to keep in mind that translations may differ from naturally occurring data, but these translations can be helpful where they complement and extend the data found elsewhere.

The Bible is an example of what Cysouw and Wälchli (2007: 95) call “massively parallel texts” (MPT). Parallel texts are translationally equivalent texts. The Bible is not only a parallel text but a parallel text that has been translated into an extremely large number of languages (Dahl 2007: 174). Wycliffe Bible Translators report that the New Testament is available in more than 1,500 languages, while the entire Christian Bible has been translated into almost 700 languages.² Other examples of parallel texts include the UN’s Universal Declaration of Human Rights,³ the fairy tales of Hans-Christian Andersen,⁴ and European parliamentary reports.⁵ The availability and extensiveness of the Bible

2 They add that translation work is being done in more than 2,600 languages, which suggests that the Bible’s use as an MPT is set to grow in the future. See further <https://www.wycliffe.org/about/why> (accessed May 18, 2020).

3 This text has been translated into over 500 languages and is available at <https://www.un.org/en/universal-declaration-human-rights/> (accessed May 18, 2020).

4 The Andersen Museum claims to know of translations of Andersen’s work into as many as 160 languages and to have 140 of these languages represented in their collections. See <http://andersen.museum.odense.dk/eventyr/start.asp?sprog=engelsk> (accessed May 18, 2020).

5 These reports are currently translated into twenty-four languages and are available at <https://www.europarl.europa.eu/plenary/en/texts-submitted.html#> (accessed May 18, 2020). For additional examples of MPTs, see Cysouw and Wälchli (2007: 96–97).

lead Song (2018: 123) to regard the Bible as a good MPT for linguistic typology. We employ the Bible data in this study as a supplemental source of data because the study of the English-Korean Parallel Corpus elicited a small number of results. This is not to ignore limitations in employing the Bible as an MPT. The Bible is a translation of a written text and likely utilizes language that is genre-specific, register-specific, and different from spoken language.⁶ Nevertheless, MPTs such as the Bible “are an important addition to the kinds of data used in linguistic typology. They are surely not the holy grail of language comparison, but parallel texts are a useful and needed supplement to the traditional data source of typology” (Cysouw and Wälchli 2007: 98). As a good MPT, we expect that using the Bible as a data resource could also be beneficial for extending the current research to other languages.⁷

One English and three Korean Bible translations were used. The selection of each Bible translation was based on the translation approach of each version. Bible translation versions can be divided into three broad approaches: formal equivalence, dynamic equivalence, or balanced.⁸ The ultimate goal of the formal equivalence approach is to be as steadfast to the original text as possible. At the other end of the spectrum, the dynamic equivalence approach tries to transfer the meaning of the original text in a form that is natural to the target language. The balanced approach provides a middle road.

For this research, an English Bible translation adopting the balanced approach has been used. The New International Version (NIV) aims to offer an accurate text in natural English, taking the balanced approach to translation as a *via media* to the formal equivalence and dynamic equivalence approaches.⁹ Three Korean versions representing each of the three translation approaches have also been used. The Kayyekkayceng (KK) represents the formal equivalence approach because it aims to reflect as much as possible the form, grammar, and word

6 For further discussion of the difficulties and benefits of using the Bible in linguistic typology, see de Vries (2007).

7 For additional discussion of both the promise and potential problems of using MPTs in the field of Linguistic Typology, see the articles published in *Sprachtypologie und Universalienforschung* 60(2) (2007); Song (2018: 123–126); Wälchli (2010).

8 The translation approaches are outlined in terms used by the Korean Bible Society. (<http://www.bskorea.or.kr/default.aspx>). For a fuller and up-to-date discussion of translation theory, see House (2018).

9 See the International Bible Society (<http://www.biblica.com/bible/niv-bible/>) for NIV.

order of the original texts. The Pyocwunsaypenyek (PS) was released as a response to the KK and employs the dynamic equivalence approach. As an alternative to both translations, Wulimal (WM) was issued in 2004 and pursues the balanced approach to translation.¹⁰

In what follows, examples from the Bible are marked as either Old Testament or New Testament in recognition of the fact that modern translations of the Bible have multiple source languages. The primary language of the Old Testament is Biblical Hebrew, while the language of the New Testament is Ancient Greek.

3. Data collection and data processing

After introducing the corpora in this article, we turn in Section 3 to describe how target constructions were processed and collected. We begin by showing how GRPs were identified from the Korean Corpora. We then illustrate how Korean counterparts to English genitive RCs (K-Cs) were retrieved and categorized.

3.1 Retrieving the Korean data

We collected the Korean data in two steps. First, all sentences with pronouns were retrieved using a Concordancer. Second, retrieved sentences were examined manually to confirm whether they are examples of GRPs. Details of these two processes will be described below.

3.1.1 Retrieving examples with pronouns

We retrieved all pronouns that can refer to the head noun of a genitive RC. Three points should be mentioned regarding the selection of the retrieved pronouns. First, categories that do not have the distributional property of nouns

¹⁰ For further information about these Korean Bible translations, see the Korean Bible Society (<http://www.bskorea.or.kr/default.aspx>) for the KK and the PS. See Wulimal Bible (http://www.duranno.com/bdictionary/wuri_default.asp) for the WM.

have been regarded as pronouns if they have a referential property, following the practice of Haspelmath (1997) and J.-H. Park (2007). For example, *nay* 'my', *caki* 'oneself', or *ku* 'the' were included in the search list although they share the distributional property not with pronouns but with determiners.

Second, in Korean, a reflexive pronoun can function as an RP in an RC although the head noun appears in the main clause not in an RC. This is because a reflexive pronoun in Korean allows its referent to exist in another clause as in (6) (the subordinate clause is bracketed in the text).

- (6) *John-un* [*caki-ka* *chencay-i-Ø-la-ko*]
 John-TOP self-NOM genius-COP-PRS-DEC-QUOT
sayngkaka-Ø-nta.
 think-PRS-DEC
 'John thinks that he is a genius.' (J.-H. Park 2007: 131)

Third, the demonstrative pronoun *ku* 'the' was examined as a potential candidate for an RP in a genitive RC. This is because *ku* 'the' appears in the position that a genitive pronoun is supposed to take. We can examine the following examples.

- (7) a. *yehowa* *hananim-i* *Acam-ul* *kiphi*
 Lord God-NOM Adam-ACC deeply
cantul-key ha-si-ni *cantul-may* *ku-ka* ***ku***
 sleep-CAUS-HON-and fall into sleep-and then he-NOM the
kalpistay hana-lul *chwiha-ko sal-lo* *taysin*
 rib one-ACC take-and flesh-COM instead
chaywu-si-ko
 fill-HON-and
 'The LORD God caused Adam to fall into a deep sleep, and when he fell asleep, he took one of his ribs and filled (it) with flesh instead.'
 (Old Testament [KK])
- b. *yehowa* *hananim-kkeyse* *Acam-ul* *kiph-un*

Lord God-NOM.HON Adam-ACC deep-REL.REAL
cam-ey ppaci-key ha-si-ni ku-ka cantul-ess-supnita
 sleep-OBL fall-CAUS-HON-and he-NOM fall into sleep-PST-DEC
*hananim-keyse **ku-uy** kalpipyee hana-lul chwihasi-ko*
 God-NOM.HON he-GEN rib one-ACC take-HON-and
sal-lo taysin chaywu-si-ess-supnita
 flesh-COM instead fill-HON-PST-DEC
 ‘God caused him to fall asleep deeply, so he fell asleep. God took one of
 his ribs and filled it with flesh instead.’
 (Old Testament [WM])

In (7a), *ku* ‘the’ (bolded in the text) takes the place of *ku-uy*. This function can be compared to (7b), which attempts to transfer the same meaning as (7a). In (7b), *ku-uy* ‘his’ (bolded in the text) is used.

Based on this observation, we can expect *ku* ‘the’ to take the role of an RP in a GRP.¹¹ So it also has been retrieved from the corpus data as well as other genitive pronouns.¹²

3.1.2 Identifying a GRP among the retrieved examples

Among the retrieved examples, those that meet the conditions below were identified as GRPs:

(8) Criteria for GRPs

- There is a relative clause construction
- A pronoun, co-referential to the head noun, appears in the relative clause
- The head noun has a genitive role in the relative clause

The RC in (9) can be regarded as an GRP.

11 The relevance of the anaphoric function in demonstrative pronouns is widely held to be universal (Kibrik 2011: 124).

12 See J.-E. Lee (2017a: 17-19) for further explanation of anaphoric function of *ku*

- (9) *wang-i* *ku-uy* *son-ey* *uyciha-yess-te-n*
king-NOM he-GEN hand-LOC lean-PST-PST.IMPV-REL.REAL
ku-uy *cangkwan-ul* *seywu-e*
he-GEN general-ACC put up-and
sengmun-ul *cikhi-key ha-yess-teni*
city gate-ACC keep-CAUS-PST-and
Lit. ‘*The king_i put up his general_j that he_i leaned on his_j hand and had
him_j keep the city gate.
(Old Testament [KK])

First, as in *uyciha-yess-te-n* ‘lean-PST-PST.IMPV-REL.REAL’ the predicate in the construction is marked by an RC marker *-n*. Second, the pronoun *ku-uy* ‘his’ appears in the RC which is co-referential to the head noun *cangkwan* ‘general’. Third, the head noun is interpreted as a genitive noun in the RC as in (10).

- (10) *wang-i* *ku-uy* *cangkwan-uy* *son-ey* *uyciha-yess-ta*
king-NOM he-GEN general-GEN hand-LOC lean-PST-DEC
“The king leaned on the hand of the general.”

It should be noted that the RP in (9) is not optional. Without it, the RC in (9) turns out ungrammatical.

Unlike the RC in (9), the RP in the RC in (11) is optional. Without the RP *caki* “self” the RC is grammatical.

- (11) *caki* *cip-i* *namccok-i-n* *salam-un?*
self house-NOM south-COP-REL.REAL man-TOP
‘What about a man whose house is toward the south?’
(Contemporary Korean Corpus)

In fact, (11) can be regarded as a subject RC or a topic RC, although we cannot rule out the possibility of a GRP. The RC in (11) meets the first requirement of GRP since there is an RC marker *-n* at the end of the predicate *i-* ‘is’, which satisfies the first criterion. Also, the RC in (11) meets the second

requirement of GRP. The reflexive pronoun, *caki* ‘self’, appears in the RC, and there is no possibility for it to refer to anything other than the head noun. This is because the predicate *i-* ‘is’ is a one-place predicate. Thus, there is no other constituent that can be introduced to which the reflexive pronoun can refer except for the head noun. When it comes to the third requirement, however, it is not clear whether the RC in (11) meets the requirement. The head noun, *salam* ‘man’, can be said that it holds not a genitive role in the RC as in (12a), but also a topic as in (12b) or the first nominative NP in a double nominative construction as in (12c).

- (12) a. *ku salam-uy cipi namccok-i-Ø-ta*
 the man-GEN house-NOM south-COP-PRS-DEC
 ‘The man’s house is toward the south.’
- b. *ku salam-un caki cipi namccok-i-Ø-ta*
 the man-TOP self house-NOM south-COP-PRS-DEC
 ‘As for the man, his house is toward the south.’
- c. *ku salam-i caki cipi namccok-i-Ø-ta*
 the man-NOM self house-NOM south-COP-PRS-DEC
 ‘As for the man, his house is toward the south.’

Example (11) is a GRP only when it is formed from (12a). If it comes from (12b) or (12c), the head noun does not have a genitive role in the RC. The problem is, however, that there is no way to say whether (11) is formed from (12a), (12b), or (12c). Although we counted examples like (11) as a GRP because it can be related to (12a), the RP in such a case does not seem to be used for RC formation but for another reason, such as adding emphasis to the head noun. Issues regarding optional RPs will be discussed in Section 5.2.2.

Lastly, we do not regard examples like (11) as a genitive RC, although the head noun can be interpreted as genitive noun in an RC.

- (13) *Elisha-ka icen-ey atul-ul tasi sall-i-e*
 Elisha-NOM previous-OBL son-ACC again revive-LNK
cwu-Ø-n yein

give-PFV-REL.REAL woman
 'The woman whose son Elisha had restored to life'
 (Old Testament [KK])

This is because a genitive noun that cannot be promoted to a non-genitive position does not seem to be relativized by the gap strategy. RCs in (4) and (9) are cases in point. Both examples are repeated here in (14) and (15) below.

- (14) a. **(caki-uy) kay-ka chongmyengha-n John*
 self-GEN dog-NOM smart-REL.REAL John
 'John, whose dog is smart'
- b. *John-uy kay-ka chongmyengha-Ø-ta.*
 John-GEN dog-NOM smart-PRS-DEC
 'John's dog is smart.'
- c. **John-un kay-ka chongmyengha-Ø-ta.*
 John-TOP dog-NOM smart-PRS-DEC
 'As for John, (his) dog is smart.'
- d. **John-i kay-ka chongmyengha-Ø-ta.*
 John-NOM dog-NOM smart-PRS-DEC
 'As for John, (his) dog is smart.'
- (15) a. *wangi-i *(kuj-uy) son-ey uyciha-yess-te-n*
 king-NOM he-GEN hand-LOC lean-PST-PST.IMPF-REL.REAL
ku-uy cangkwan-ul seywu-e
 he-GEN general-ACC put up-and
sengmwur-ul cikli-key ha-yess-teni
 city gate-ACC keep-CAUS-PST-and
 Lit. '*The king_i put up his general_j that he_i leaned on his_j hand and had him_j keep the city gate.'
 (Old Testament [KK])
- b. *wangi-i ku-uy cangkwan-uy son-ey uyciha-yess-ta.*
 king-NOM he-GEN general-GEN hand-LOC lean-PST-DEC
 "the king leaned on the hand of the general."

- c. **wang-i* *ku-uy* *cangkwan-un* *son-ey* *uyciha-yess-ta*
king-NOM he-GEN general-TOP hand-LOC lean-PST-DEC
“the king leaned on the hand of the general.”

In both examples, the RC is ungrammatical without the RP in the RC. The head noun in (14) cannot be interpreted as a topic as in (14c) or a nominative noun as in (14d), but a genitive noun only as in (14b). Likewise, the head noun in (15) can be interpreted as a genitive noun only as in (15b). A similar observation is made in M.-G. Kim (2010). Providing the examples below, M.-G. Kim (2010: 139-140) argues that a genitive noun can be relativized when it is a constituent of a noun phrase that functions as a subject (as in [14a]) or an object (as in [15a]), which is a requirement for it to be promoted to a subject and an object position.

- (16) a. *chelswu-uy* *tongsayng-i* *cip-ey*
Cheolsoo-GEN younger brother-NOM house-ALL
ka-ass-ta
go-PST-DEC
‘Cheolsoo’s younger brother went home.’
- b. *tongsayng-i* *cip-ey* *ka-n* *chelswu*
younger brother-NOM home-ALL go-REL.REAL Cheolsoo
‘Cheolsoo, whose younger brother went home’
(M.-G. Kim 2010: 139)
- (17) a. *chelswu-uy* *nwunnwul-i* *wuli-lul*
Cheolsoo-GEN tear-NOM we-ACC
wulli-ess-ta
make someone cry-PST-DEC
‘Cheolsoo’s tears made us cry.’
- b. **nwunnwul-i* *wuli-lul* *wulli-n*
tear-NOM we-ACC make someone cry-REL.REAL
chelswu
Cheolsoo

'Cheolsoo whose tears made us cry.'

(M.-G. Kim 2010: 139)

Based on more examples, he argues that a position can be relativized when it can be topicalized, that is, a genitive noun can be relativized when it can be promoted to a topic position (M.-G. Kim 2010: 145).

Following Keenan and Comrie (1977), who regard a grammatical position as unrelativizable when it can be relativized only after it is promoted to a higher position on the AH, we do not regard the RC in (13) as an example of a genitive RC formed from (18a), but as an RC formed on an object or a topic that is formed from (18b) and (18c) respectively.

- (18) a. *Elisha-ka icen-ey ku yein-uy atul-ul*
 Elisha-NOM previous-OBL the woman-GEN son-ACC
tasi salli-e cw-ess-ta
 again revive-LNK give-PST-DEC
 'Previously, Elisha had restored the woman's son to life.'
- b. *Elisha-ka icen-ey ku yein-ul atul-ul*
 Elisha-NOM previous-OBL the woman-ACC son-ACC
tasi salli-e cw-ess-ta
 again revive-LNK give-PST-DEC
 'Previously, Elisha had restored the woman's son to life.'
- c. *ku yein-un Elisha-ka icen-ey atul-ul*
 the woman-TOP Elisha-NOM previous-OBL son-ACC
tasi salli-e cw-ess-ta
 again revive-LNK give-PST-DEC
 'As for the woman, Elisha had restored her son to life previously.'

Nevertheless, when we analyzed the data, we distinguished (13) from (19) below.¹³ This is because (11), but not (19), can be regarded as a genitive RC depending on the point of view - the head noun in (17) can take a subject role

13 We categorized examples like (13) as "Gapped", and those like (19) as "Paraphrased. See Section 3.2.2 for detailed description of the categorization of the collected data.

only in the RC.

- (19) *kippu-n* *maum-ulo* *nay-nu-n* *ca*
 pleasing-REL heart-COM give-IMPF-REL.REAL man
 ‘A man who gives with pleasing heart’
 (Old Testament [KK])

3.2 Retrieving Korean counterparts to English genitive RCs

3.2.1 Identifying English genitive RCs

To retrieve English genitive RCs (E-RCs) from the Korean-English Parallel Corpus and the Bible, sentences containing the English words *whose*, *of which*, or *of whom* were searched for in each resource. Examples of E-RCs with *whose*, *of which*, and *of whom* are provided below.

- (20) *If Shanghai succeeds, it will be a victory for all China because Shanghai is the head of a big dragon whose body forms the Yangtze River, ready to swim out to the vast seas.*
 (Korean-English Parallel Corpus)
- (21) *Many years ago when I was a little pig my mother and the other sows used to sing an old song of which they knew only the tune and the first three words.*
 (Korean-English Parallel Corpus)
- (22) *Among all these soldiers there were seven hundred select troops who were left-handed, each of whom could sling a stone at a hair and not miss.*
 (Old Testament [NIV])

There were some examples in English with *whose*, *of which*, or *of whom* that were not RCs. In (23), for instance, *whose* is used as interrogative pronoun, and in (24) and (25), the head noun does not have a genitive role. Thus, examples like (23) to (25) were excluded from E-RCs.

- (23) *Whose daughter are you?*

(Old Testament [NIV])

(24) *He built altars in the temple of the LORD, of which the LORD had said, "In Jerusalem I will put my name."*

(Old Testament [NIV])

(25) *He of whom these things are said belonged to a different tribe, and no one from that tribe has ever served at the altar.*

(Old Testament [NIV])

3.2.2 Categorizing retrieved Korean counterparts to English genitive RCs

We categorize the retrieved K-Cs to E-RCs into 15 types as in Figure 1.

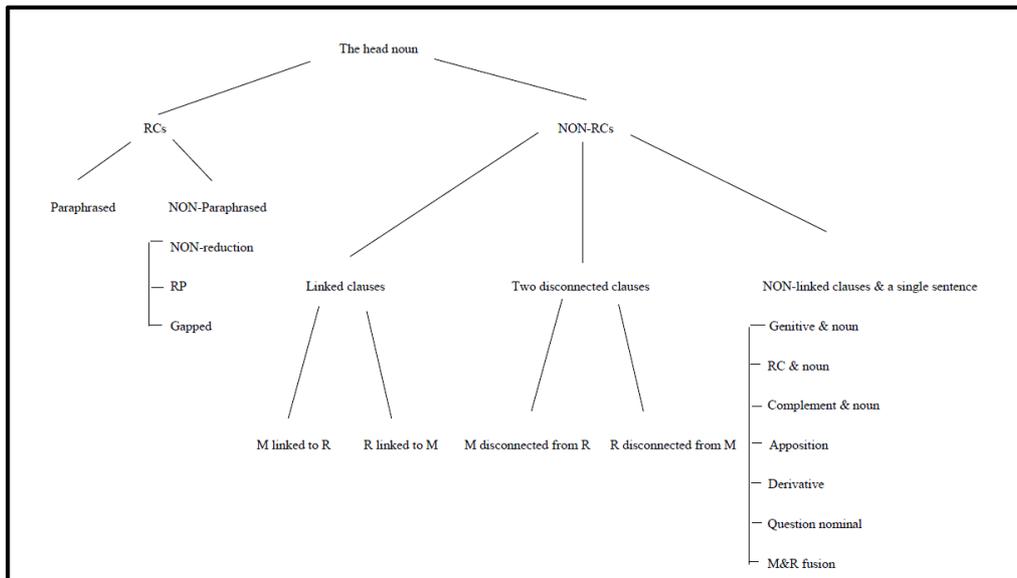


Figure 1: Classification of K-Cs to E-RCs

The features and examples of each category are given in Table 4.

Table 4: The features and examples of K-Cs to E-RCs

Category	Feature
	Example
Paraphrased	The grammatical role of the head noun in an E-RC is not a genitive. K-C: Old Testament > KK

	<p><i>Israel cason-eykey nyenglyengha-ye 'nay-key yeymwul-ul</i> Israel descendant-DAT commend-and I-DAT offering-ACC <i>kacyeo-la' ha-ko kippu-n maum-ulo</i> bring-IMP say-and pleasing-REL.REAL heart-COM <i>nay-nu-n ca-ka nay-key patchi-nu-n</i> give-IMPF-REL.REAL man-NOM I-DAT offer-IMPF-REL.REAL <i>motun kes-ul nehuy-nun pat-ulcini-la</i> all thing-ACC you.PL-TOP receive-MDL-IMP 'Commend Israel by saying "bring offerings to me" and receive everything that a man who gives with pleasing heart offers to me.'</p>
Non-reduction	<p>The head noun of an E-RC exists in an RC as a full noun. K-C: Old Testament > WM <i>kulena sengso an-eyse sokcoy-lul ha-ki wihayse</i> but sanctuary inside-LOC atonement-ACC do-PURP <i>sokcoyceymwul-uy phi-lul hoymak an-ulo</i> sin offering-GEN blood-ACC Tent of Meeting inside-ALL <i>kaci-ko tuleka-Ø-n yeymwul-un mek-ci</i> bring-CONVERB come in-PFV-REL.REAL offering-TOP eat-CONVERB <i>mal-ko pwul-lo thaywu-eya ha-Ø-nta</i> NEG-and fire-COM burn-MDL-PRS-DEC 'But as for the offering such that the offering's blood is brought into the Tent of Meeting in order to do atonement in sanctuary, do not eat it but burn it with fire.'</p>
RP	<p>The head noun of an E-RC exists in an RC as a pronoun. K-C: Old Testament > KK <i>wangi-i ku j-uy son-ey uyciha-yess-te-n</i> king-NOM he-GEN hand-LOC lean-PST-PST.IMPF-REL.REAL <i>kui-uy cangkwan j-ul seywu-e</i> he-GEN general-ACC put up-and <i>sengmwun-ul cikli-key ha-yess-teni</i> city gate-ACC keep-CAUS-PST-and Lit. '*The king_i put up his general_j that he_i leaned on his_j hand and had him_j keep the city gate.'</p>
Gapped	<p>The head noun of an E-RC is deleted from an RC. (In these examples, the head noun can be interpreted as a genitive or a non-genitive noun in an RC. As shown in Section 3.2.2, we do not regard examples of "Gapped" as genitive RCs. This is because the head nouns in these examples are likely to be relativized after they are promoted to non-genitive position such as a subject, an object, or a topic position. However, we categorized these examples as "Gapped" in order to differentiate them from</p>

	<p>“Paraphrased”, which allows only non-genitive RC interpretation.)</p> <hr/> <p>K-C: Old Testament > KK</p> <p><i>Elisha-ka icen-ey atul-ul tasi salli-e</i> Elisha-NOM previous-OBL son-ACC again revive-CONVERB</p> <p><i>cwu-Ø-n yein-eykey ilu-toy ne-nun</i> give-PFV-REL.REAL woman-DAT say-and you-TOP</p> <p><i>ilena-ase ney kacok-kwa hamkkey kecwuha-l</i> stand up-and your family-COM together reside-CONVERB</p> <p><i>manha-n kos-ulo ka-ase kecwuha-la yehowa-kkeyse</i> worthy-REL.REAL place-ALL go-and reside-IMP Lord-NOM.HON</p> <p><i>kikum-ul pwulu-si-ess-uni kutaylo i</i> famine-ACC summon-HON-PST-because as it is this</p> <p><i>ttang-ey chil neyn tongan inha-li-la ha-ni</i> earth-LOC seven years for be present-FUT-DEC say-and</p> <p>‘Elisha said to the woman whose son he gave life again, “You stand up and go to a place where you and your family can live together and live there.” Because the Lord summoned famine, (famine) will be present on this earth for seven years as it was said.’</p> <hr/> <p>Genitive & noun An E-RC is converted into a construction consisting of a genitive and a noun.</p> <hr/> <p>K-C: Old Testament > WM</p> <p><i>sal-a iss-nu-n atul-uy emeni-nun caki</i> live-CONT-IMPF-REL.REAL son-GEN mother-TOP self</p> <p><i>atul ttaymwuney sosulachikey nolla-a</i> son because of frighteningly be shocked-and</p> <p><i>wang-eykey malha-ess-supnita</i> king-DAT tell-PST-DEC</p> <p>‘The mother of the living son was greatly shocked because of her son and told the king.’</p> <hr/> <p>RC & noun An E-RC is converted into an RC construction, of which the head noun is different from that of the E-RC.</p> <hr/> <p>K-C: Old Testament > KK</p> <p><i>Israel-uy hananim yehowa-kkeyse ku-uy nalkay alay-ey</i> Israel-GEN God Lord-NOM.HON he-GEN wing under-LOC</p> <p><i>poho-lul pat-ule o-Ø-n sang</i> protection-ACC receive-PURP come-PFV-REL.REAL reward</p> <p><i>cwu-si-ki-lul wenha-Ø-nda</i> give-HON-NOML-ACC wish-PRS-DEC</p> <p>‘I wish that the Lord God of Israel gives (you) a reward that (is given when someone) comes under his wing for protection.’</p> <hr/>
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Complement & noun	<p>An E-RC is converted into a construction consisting of a complement clause and a noun.</p> <p>K-C: New Testament > KK</p> <p><i>palo kuttay nyechnyech salam-tul-i o-ase Pilate-ka</i> right that time some man-PL-NOM come-and Pilate-NOM</p> <p><i>kallilli salam-tul-uy phi-lul ku-uy huysayngceymwul-kwa</i> Galilean man-PL-GEN blood-ACC he-GEN sacrifices-COM</p> <p><i>sekk-ess-ta(ko ha-)nu-n sosik-ul</i> mix-PST-DEC-QUOT QUOTVERB-IMPF-REL.REAL news-ACC</p> <p><i>Jesus-kkey cenha-ess-supnita</i> Jesus-DAT.HON deliver-PST-DEC</p> <p>‘Right at that time, some men came and delivered news to Jesus that Pilate mixed the blood of Galilean people into his sacrifices.’</p>
Apposition	<p>An E-RC is converted into two appositive NPs.</p> <p>K-C: Old Testament > KK</p> <p><i>ku ttay-ey Hakkis-uy atul Atoniya-ka susulo nqphi-ese</i> the time-at Hakkis-GEN son Atoniya-NOM oneself praise-and</p> <p><i>ilu-ki-lul nay-ka wang-i toy-li-la ha-ko</i> say-NOML-ACC I-NOM king-NOM become-FUT-DEC say-and</p> <p><i>caki-lul wihay pyengke-wa howipyeng osip</i> self-ACC for one’s good chariots-and guard fifty</p> <p><i>myeng-ul cwunpiha-ni</i> CLF-ACC prepare-and</p> <p>‘By then, Atoniya, the son of Hakkis, praised himself and said, “I will be a king”, and prepared 50 guards and chariots.’</p>
Derivative	<p>An E-RC is converted into a derivative.</p> <p>K-C: Old Testament > WM</p> <p><i>huynyen-i toy-myen ku path-un kukes-ul sa-Ø-n</i> Jubilee-NOM become-if the field-TOP it-ACC buy-PFV-REL.REAL</p> <p><i>alam-uloputhe sangsok-ul thonghay</i> man-ABL succession-ACC through</p> <p><i>wensoyuca-eykey tolaka-l kes i-ta</i> original owner-DAT return-MDL-DEC</p> <p>‘When Jubilee comes, the field will be returned from the man who bought it to the original owner through succession.’</p>
Question nominal	<p>An E-RC is converted into a nominal clause with a question word.</p> <p>K-C: Old Testament > KK</p> <p><i>kuleca Ruth-un sieneri-kkey caki-ka nwukwu-ney</i> then Ruth-TOP mother in law-DAT.HON self-NOM who-GEN</p> <p><i>path-eyse ilha-ess-nunci malha-e tuli-ess-supnita</i></p>

	field-LOC work-PST-COMP tell-LNK give.HON-PST-DEC 'Then Ruth told her mother-in-law in whose field she worked.'
M & R fusion	M stands for the main clause of an E-RC and R stands for an RC of the E-RC. An E-RC and the main clause are converted into a simple clause. K-C: New Testament > KK <i>Judah-nun Tamar-eykeyse Perez-wa Zerah-lul nah-ko</i> Judah-TOP Tamar-ABL Perez-and Zerah-ACC give birth-and <i>Perez-nun Hezron-ul nah-ko Hezron-un</i> Perez-TOP Hezron-ACC give birth-and Hezron-TOP <i>Ram-ul nah-ko</i> Ram-ACC give birth-and Lit. 'Judah gave birth to Perez and Zerah with Tamar, and Perez gave birth to Hezron, and Hezron gave birth to Ram.'
M linked to R	The main clause of an E-RC is converted into an adverbial clause or a coordinated clause, and then this is linked to the E-RC, which is converted into an independent clause. K-C: Old Testament > WM <i>Abigail-un Amasa-uy eneni-i-ntey Amasa-uy</i> Abigail-TOP Amasa-GEN mother-COP-and Amasa-GEN <i>apaci-nun Ismael salam Jether-i-Ø-pnita</i> father-TOP Ishmaelite man Jether-COP-PRS-DEC Lit. 'Abigail is the mother of Amasa, and Amasa's father is Jether, a man of Ishmaelite.'
R linked to M	An E-RC is converted into an adverbial clause or a coordinated clause, and then this is linked to the main clause of the E-RC. K-C: New Testament > WM <i>cwuin-i tolao-ase cong-tul-i klay-e iss-nu-n</i> lord-NOM return-and servant-PL-NOM awake-CONT-IMP-REL-REAL <i>kes-ul po-myen ku cong-tul-un pok-i</i> thing-ACC see-if the servant-PL-TOP blessing-NOM <i>iss-ul kes i-ta</i> exist-MDL-DEC Lit. 'If the Lord returns and sees that the servants are awake, then there will be blessings for the servants.'
M disconnected from R	The main clause of an E-RC is disconnected from the E-RC, which is converted into an independent clause. The former is followed by the latter. K-C: Old Testament > WM <i>kulen hwu ku-nun Sorek kolccaki-uy han yeca-wa</i> such after he-TOP Sorek valley-GEN one woman-COM

	<i>salang-ey</i> love-LOC	<i>ppaci-ess-supnita</i> fall-PST-DEC	<i>kunye-uy</i> she-GEN	<i>ilum-un</i> name-TOP
	<i>Delilah-i-Ø-pnita</i> Delilah-COP-PRS-DEC Lit. 'After that, he fell in love with a woman from Sorek Valley. Her name is Delilah.'			
R disconnected from M	An E-RC is converted into an independent clause, and then this is disconnected from the main clause of the E-RC. The former is followed by the latter.			
	K-C: Old Testament > WM			
	<i>ku-uy</i> he-GEN	<i>chep-uy</i> concubine-GEN	<i>ilum-un</i> name-TOP	<i>Reumah-i-ess-supnita</i> Reumah-COP-PST-DEC
	<i>Tebah-wa</i> Tebah-and	<i>Gaham-kwa</i> Gaham-and	<i>Tahash-wa</i> Tahash-and	<i>Maacah-lul</i> Maacah-ACC
	<i>nah-ass-supnita</i> give birth-PST-DEC Lit. 'His concubine's name was Reumah. She also gave birth Tebah, Gaham, Tahasa, and Maacah.'			

The categorization of K-Cs is made based on formal features.¹⁴ When it comes to the distribution of "Linked clauses", however, both semantic and formal aspects need to be considered. After being grouped into subordination or coordination, examples of "Linked clauses" were further classified into smaller semantic groups based on the semantic relation held between the two linked clauses. For this research, these semantic relations have been categorized into nine types based on J.-H. Park (2011): time, background, concession, condition, cause, and purpose for the subordination group, and listing, contrasting, and disjunction for the coordination group. Among these nine subcategories, six semantic relations were observed in "Linked clauses" examples. Table 5 shows these relations along with the conjunctive markers that are used in K-Cs.¹⁵

Table 5: The classification of "Linked clauses"

Semantic types of linked clauses		
Linking type	Semantic types	Conjunctive marker used in "Linked clauses"
Subordination	Time	<i>-a/é(se)</i> , <i>ko(se)</i> , <i>-(u)n chay</i> , <i>-(u)n taum</i> , <i>-ko(se)</i>

14 Examples of each type are given in J.-E. Lee (2017a: 307-313).

15 Examples of each type are given in J.-E. Lee (2017a: 314-316).

	Background	<i>-(u)ni, -nani, -(u)toy, -teni, -(u)n/huntay, -(u)lini, -nani</i>
	Concession	<i>-(u)na, -ciman, -manun</i>
	Condition	<i>-(u)mayer, -(u)l ttay, -a/serun</i>
	Cause	<i>-a/ese, -(u)ni, -ki ttaymwuney, -(u)may, -(u)ncuk, -(u)mulo</i>
Coordination	Listing	<i>-ko, -yo, -(u)nye</i>

3.3 Consistency test among different data groups

Lastly, to reach a valid conclusion about how E-RCs have been expressed in K-Cs, the results from the Korean-English corpus and the Bible were examined for consistency. Correspondence among the data groups was measured primarily by the expression of the head noun of an E-RC in a K-C and the semantic type of linked clauses.¹⁶

4. Description of the data

Having discussed how the data was collected and categorized, we now describe the data itself. The retrieved Korean data is illustrated at the beginning followed by the retrieved Korean-English data. The Korean-English data is illustrated focused on two points: the expression of the head noun and semantic types of linked clauses. After utilizing corpus and biblical data, it will then be helpful to test the consistency of the two data sets in order to determine the reliability of the translated biblical data.

4.1 The retrieved Korean data

4.1.1 The composition of the retrieved pronoun

Korean data were retrieved based on the pronouns that can function as an RP. The numbers of the retrieved examples are provided in Table 6.

¹⁶ The results are described in Section 4.3.

Table 6: The composition of the retrieved sentences¹⁷

Features	Number of sentences with each type of a pronoun (%)		
	The spoken data	The written data	Total
Personal pronoun	6,281 (48.4)	54,162 (38.2)	60,443 (39.1)
Reflexive pronoun	718 (5.5)	14,379 (10.2)	15,097 (9.8)
Demonstrative pronoun	5,980 (46.1)	73,038 (51.6)	79,018 (51.1)
Total	12,979 (100)	141,579 (100)	154,558 (100)

Table 6 describes the number of retrieved sentences containing pronouns. Personal pronouns and demonstrative pronouns are most frequent in both spoken and written data, while reflexive pronouns comprised only 5.5% of the spoken data and 10.2% of the written data.

4.1.2 The retrieved GRPs in Korean

As Table 7 shows, the number of GRPs found in the Contemporary Korean Corpus is extremely small.

Table 7: The number of GRPs in the Contemporary Korean Corpus

Retrieved pronouns			Number of GRPs	
			Spoken Data	Written Data
Personal pronoun	Third-person	<i>ku-uy</i> 'his'	-	1
		<i>ku-tul-uy</i> 'their'	-	2
Reflexive pronoun		<i>caki</i> 'self'	1	-
		<i>casin-uy</i> 'self'	-	1
Demonstrative pronoun		<i>ku</i> 'the'	-	5
Total			1	9

Only one GRP was found from the spoken data, and nine GRPs were found from the written data. With regard to which type of RP was in each sentence, a reflexive pronoun was used in the spoken example. Regarding the written data, third-person pronouns were used as an RP in three GRPs, reflexive pronouns in one GRP, and demonstrative pronouns in five GRPs.

Two points can be made regarding Table 7. First, one cannot say that GRPs are more likely to be used in the written data based on the fact that more GRPs

¹⁷ Percentages are rounded throughout this paper.

have been found in it. This is because the number of retrieved spoken data is smaller than those of the written data. In fact, as can be seen in Table 5, the number of the retrieved spoken data was about 10 percent of that of the retrieved written data. Correspondingly, the number of GRPs from the spoken data is one-ninth of those from the written data. Second, a reflexive pronoun was used as an RP in the only GRP from the spoken data, which is noteworthy since reflexive pronouns comprised 5.5% of the retrieved spoken data (see Table 6).¹⁸

4.2 The retrieved Korean-English data

Previously, it was shown that few GRPs were found from the Contemporary Korean Corpus. The small number of GRPs suggests that there is an alternative way to transfer the meaning/function of GRPs. To observe how Korean expresses E-RCs, therefore, we examined K-Cs to E-RCs from the Korean-English Parallel Corpus and the Bible.

4.2.1 The results from the corpus data

From the entire Korean-English Parallel Corpus, 20 E-RCs have been found.¹⁹ Table 8 shows how K-Cs to these 20 E-RCs are categorized.

Table 8: K-Cs in the Korean-English Parallel Corpus

Features		Number (%)
RCs	Paraphrased	9 (45)
	RP	1 (5)
NON-RCs	Genitive & noun	1 (5)
	Indirective question	1 (5)
	M & R fusion	1 (5)
	M linked to R	5 (25)
	M disconnected from R	2 (10)
Total		20 (100)

“Paraphrased” appeared most frequently in the data. The number of “RCs”

¹⁸ The GRPs from the spoken and written data can be found in J.-E. Lee (2017: 317-319).

¹⁹ In 14 examples, whose is used, and in six examples, of which is used.

and “NON-RCs” was the same: 10 examples each. In “RCs”, there was only one “NON-Paraphrased”, that of “RP”. In “NON-RCs”, “M linked to R” appeared most frequently.

When it comes to the expression of the head noun of an E-RC, “RCs” and “NON-RCs” showed different results. Among “RCs”, the head noun of an E-RC was highly likely to be expressed as a non-genitive NP. In seven examples out of eight, the head noun of an E-RC was non-genitive. In the sole genitive example, a demonstrative pronoun was used as an RP. Among “NON-RCs”, however, there was no strong tendency in how the head noun of an E-RC is expressed. There were seven “NON-RCs” that are relevant to examining the expression of the head noun of an E-RC. In four of them, the head noun of an E-RC was expressed as a genitive; in two of them, it was expressed as a non-genitive; and, in one of them, it was obliterated.

Lastly, there were five examples of “Linked clauses”. There was no distinctive type. Table 9 shows the conjunctive markers which were used in each example.

Table 9: “Linked clauses” in the Korean-English Parallel Corpus

Semantic types of linked clauses			Number
Subordination	Time	<i>-(u)mye</i>	1
	Background	<i>-(u)n/huntey</i>	1
	Concession	<i>-ciman</i>	2
Coordination	Listing	<i>-(u)mye</i>	1
Total			5

4.2.2 The results from the Bible data

From the NIV, 239 sentences with the relative pronoun whose were found. However, only 187 sentences were examined for this research because two data groups were excluded. First, 16 sentences were classified as irrelevant, in which whose is used as an interrogative, not as a relative pronoun. Second, 36 sentences with more than two consecutive genitive RCs were not counted. Likewise, 20 sentences with of which, and 15 sentences with of whom have been found in the NIV. However, only six sentences, five from the former data group and one from the latter, were examined for this research because the rest of the

examples were classified as irrelevant due to the fact that the head noun of an E-RC does not have a genitive role in an RC. In total, 193 sentences with E-RCs have been examined from the Bible. Table 10 shows the description of K-Cs to these 193 E-RCs.

Table 10: K-Cs in the Bible

Features		Number (%)		
		KK	WM	PS
RCs	Paraphrased	66 (34.2)	70 (36.3)	77 (39.9)
	NON-reduction	-	1 (0.5)	-
	RP	12 (6.2)	11 (5.7)	1 (0.5)
	Gapped	20 (10.4)	19 (9.8)	13 (6.7)
NON-RCs	Genitive & noun	5 (2.6)	9 (4.7)	8 (4.1)
	RC & noun	10 (5.2)	5 (2.6)	4 (2.1)
	Complement & noun	1 (0.5)	2 (1)	1 (0.5)
	Apposition	3 (1.6)	1 (0.5)	2 (1)
	Derivative	-	1 (0.5)	-
	Question nominal	2 (1)	1 (0.5)	1 (0.5)
	M & R fusion	2 (1)	2 (1)	5 (2.6)
	M linked to R	46 (24)	37 (19.2)	27 (14)
	M disconnected from R	16 (8.3)	25 (13)	35 (18)
	R linked to M	9 (4.7)	8 (4.1)	15 (7.8)
	R disconnected from M	1 (0.5)	1 (0.5)	4 (2.1)
Total		193 (100)	193 (100)	193 (100)

Table 11 refers to the composition of the examples between “RCs” and “NON-RCs”.

Table 11: The composition of K-Cs in the Bible

Features	Number (%)		
	KK	WM	PS
RCs	98 (50.8)	101 (52.3)	91 (47.2)
NON-RCs	95 (49.2)	92 (47.7)	102 (52.8)
Total	193 (100)	193 (100)	193 (100)

As shown in Table 11, the ratios of “RCs” and “NON-RCs” was about 50:50 in all Bible versions. Notably, the proportion of “RCs” and “NON-RCs” seems to be influenced by whether their English counterpart is a restrictive RC or a non-restrictive RC. We can examine Table 12 and Table 13.

Table 12: The composition of K-Cs for the restrictive E-RCs in the Bible

Features	Number (%)		
	KK	WM	PS
RCs	78 (69)	82 (73.2)	72 (64.3)
NON-RCs	35 (31)	30 (26.8)	40 (35.7)
Total	113 (100)	112 (100)	112 (100)

Table 13: The composition of K-Cs for the non-restrictive E-RCs in the Bible

Features	Number (%)		
	KK	WM	PS
RCs	20 (25)	19 (23.5)	18 (22.2)
NON-RCs	60 (75)	62 (76.5)	63 (77.8)
Total	80 (100)	81 (100)	81 (100)

As shown in the restrictive E-RCs in Table 12, there were more than twice as many “RCs” as “NON-RCs”. This finding differs from the non-restrictive E-RCs given in Table 13, in which “NON-RCs” were almost three times as many as “RCs”. This was so in all Bible versions.

The composition of RCs is presented in Table 14.

Table 14: The composition of “RCs”

Features	Number (%)		
	KK	WM	PS
RCs Paraphrased	66 (67.3)	70 (69.3)	77 (84.6)
NON-paraphrased	32 (32.7)	31 (30.7)	14 (15.4)
Total	98 (100)	101 (100)	91 (100)

In all Bible versions, “Paraphrased” appeared much more frequently than “NON-Paraphrased”: by more than five times in the PS, and by more than two times in the KK and the WM.

The composition of NON-RCs is presented in Table 15.

Table 15: The composition of “NON-RCs”

Features	Number (%)		
	KK	WM	PS
NON-RCs Linked clauses	55 (57.9)	45 (48.9)	42 (41.2)
Two disconnected clauses	17 (17.9)	26 (28.3)	39 (38.2)
Non-linked clauses & a single	23 (24.2)	21 (22.8)	21 (20.6)

sentence			
Total	95 (100)	92 (100)	102 (100)

In Table 15, “Linked clauses” was most frequent in all Bible versions. Notably, the KK and the PS differ regarding the proportion of “Linked clauses” and “Two disconnected clauses”. In the KK, the proportion of “Linked clauses” was the highest among the three Bible versions, but the KK had the lowest proportion of “Two disconnected clauses”. The PS was the opposite, with the lowest proportion of “Linked clauses” but the highest proportion of “Two disconnected clauses”.

Tables 16 and 17 show how the head noun of an E-RC was expressed in “RCs” and “NON-RCs” respectively.

Table 16: The expression of the head noun in “RCs” in Korean versions of the Bible

Expression of the head noun		Number (%)		
		KK	WM	PS
RCs	Genitive	12 (12.2)	10 (9.9)	1 (1.1)
	Non-genitive	66 (67.3)	70 (69.3)	77 (84.6)
	Gapped	20 (20.4)	21 (20.8)	13 (14.3)
Total		98 (100)	101 (100)	91 (100)

Table 17: The expression of the head noun in “NON-RCs”²⁰

Expression of the head noun		Number (%)		
		KK	WM	PS
NON-RCs	Genitive	51 (70.8)	52 (73.2)	56 (69.1)
	Non-genitive	11 (15.3)	8 (11.3)	16 (19.8)
	Gapped	10 (13.9)	11 (15.5)	9 (11.1)
Total		72 (100)	71 (100)	81 (100)

Regarding “RCs”, the head noun of an E-RC was expressed as a non-genitive much more frequently than it appeared as a genitive or was obliterated. Regarding “NON-RCs”, the head noun of an E-RC was expressed as a genitive much more frequently than it appeared as a non-genitive or was obliterated.

It is notable that it was either a subject or an object role that the head noun took in “Paraphrased” examples as in Table 18.

²⁰ “NON-RCs” examples that are not relevant to the expression of the head noun were not counted.

Table 18: The expression of the head noun of an E-RC in “Paraphrased”

Feature			Number (%)		
			KK	WM	PS
RCs	Paraphrased	Genitive -> Subject	52 (78.8)	61 (87.1)	69 (89.6)
		Genitive -> Object	14 (21.2)	9 (12.9)	8 (10.4)
Total			66 (100)	70 (100)	77 (100)

In all Bible versions, the proportion of the cases in which it takes a subject role was much higher than the cases in which it takes an object role.

Also, it is worth mentioning that there were 24 “RPs” among the three Bible versions, and 23 out of 24 were found in the KK or the WM, each with a similar proportion. Tables 19 and 20 illustrate how an RP was expressed in “RP”.

Table 19: The expression of an RP in “RP” I

RP	Number (%)		
	KK	WM	PS
Personal pronoun	6 (50)	3 (27.3)	-
Reflexive pronoun	-	1 (9.1)	-
Demonstrative pronoun	6 (50)	7 (63.6)	1 (100)
Total	12 (100)	11 (100)	1 (100)

Table 20: The expression of an RP in “RP” II

RP		Number (%)		
		KK	WM	PS
Personal pronoun	<i>ku-uy</i> ‘his’	4 (33.3)	3 (27.3)	-
	<i>ku-tul-uy</i> ‘their’	2 (16.7)	-	-
Reflexive pronoun	<i>caki-uy</i> ‘self’	-	1 (9.1)	-
Demonstrative pronoun	<i>ku</i> ‘the’	6 (50)	7 (63.6)	1 (100)
Total		12 (100)	11 (100)	1 (100)

Table 21: Semantic types of “Linked clauses” I

Semantic types of linked clauses		Number (%)		
		KK	WM	PS
Subordination	Time	5 (9.1)	3 (6.8)	2 (4.8)
	Background	25 (45.5)	20 (45.5)	20 (47.6)
	Concession	2 (3.6)	1 (2.3)	5 (11.9)
	Condition	3 (5.5)	1 (2.3)	4 (9.5)
	Cause	6 (10.9)	6 (13.6)	1 (2.4)
Coordination	Listing	14 (25.5)	13 (29.5)	10 (23.8)
Total		55 (100)	44 (100)	42 (100)

In all Bible versions, “Background” appeared most frequently, followed by “Listing”. The full description of the conjunctive markers which were used to link the two clauses is provided in Table 22.

Table 22: Semantic types of “Linked clauses” II

Semantic types of linked clauses			Number (%)		
			KK	WM	PS
Subordination	Time	<i>-a/(se)</i>	5 (9.1)	1 (2.3)	-
		<i>-(u)n chay</i>	-	1 (2.3)	-
		<i>-(u)n taum</i>	-	-	1 (2.4)
		<i>k/(se)</i>	-	1 (2.3)	1 (2.4)
	Background	<i>-(u)ni</i>	10 (18.2)	2 (4.5)	2 (4.8)
		<i>-nani</i>	5 (9.1)	-	-
		<i>-(u)toy</i>	2 (3.6)	-	-
		<i>-teni</i>	1 (1.8)	-	-
		<i>-(u)n/huntey</i>	5 (9.1)	18 (41)	18 (42.9)
		<i>-(u)lini</i>	2 (3.6)	-	-
		<i>-(u)na</i>	1 (1.8)	-	2 (4.8)
	Concession	<i>-ciman</i>	-	1 (2.3)	1 (2.4)
		<i>-manun</i>	1 (1.8)	-	2 (4.8)
		<i>-(u)mnyen</i>	3 (5.5)	1 (2.3)	2 (4.8)
		<i>-(u)l ttay</i>	-	-	1 (2.4)
	Condition	<i>-a/ßenun</i>	-	-	1 (2.4)
		Cause	<i>-a/(se)</i>	1 (1.8)	1 (2.3)
	<i>-ki ttaymwuney</i>		-	2 (4.5)	-
	<i>-(u)ni</i>		1 (1.8)	3 (6.8)	1 (2.4)
	<i>-(u)may</i>		1 (1.8)	-	-
	<i>-(u)ncuk</i>		1 (1.8)	-	-
<i>-(u)mulo</i>	1 (1.8)		-	-	
<i>-kenul</i>	1 (1.8)		-	-	
Coordination	Listing	<i>-ko</i>	4 (7.3)	11 (25)	3 (7.1)
		<i>-yo</i>	5 (9.1)	-	2 (4.8)
		<i>-(u)mnye</i>	5 (9.1)	2 (4.5)	5 (11.9)
Total			55 (100)	44 (100)	42 (100)

It is important to highlight that the KK used more varied conjunctive markers than the WM or the PS. In the WM and the PS, *-(u)n/huntey* ‘and/ but’ was used as a clause ender in more than 40 percent of the examples.²¹

²¹ The high frequency of the conjunctive marker *-(u)n/huntey* in K-Cs should not be attributed solely to its high frequency in Korean. According to N.-H. Jo (2002: 1194), for instance, the conjunctive

4.3 Consistency and reliability

We have examined how E-RCs from the Korean-English Parallel Corpus and the Bible are expressed in K-Cs. In this section, we will investigate whether there is consistency between the results from the Corpus and those from the Bible. The results are given in Table 23.

Table 23: The result of the consistency test between the Corpus data and the Bible data²²

Features	Predominant data	
	The Corpus data ²³	The Bible data ²⁴
A. The most frequently appearing types in all data	"Paraphrased"	"Paraphrased"
B. The composition of all data	No predominant data	"RCs"
C. The composition of "RCs"	"Paraphrased"	"Paraphrased"
D. The composition of "Paraphrased"	"Subject"	"Subject"
E. The composition of "NON-Paraphrased"	"RP"	"Gapped"
F. The composition of "RP"	"Demonstrative"	"Demonstrative"
G. The composition of "NON-RCs"	"Linked clauses"	"Linked clauses"
H. The expression of the head nouns of E-RCs in K-Cs	"RC" "NON-RCs"	"Non-genitive" "Genitive"
I. The semantic type of linked clauses	"M linked to R" "R linked to M"	No predominant data No predominant data

As evident in Table 23, the Korean-English corpus and the Bible showed the same result in seven aspects (highlighted in the table) out of 11, which means that the two data groups correspond to each other by 63.7%. To decide which data group is more reliable, the number of examples from each data group can

marker *-a(se)* and *-ko(se)* appear more frequently than *-(u)ni/huntey*.

22 Since there are three different data groups in the Bible, that is, the KK, the WM, and the PS, the predominant type has been decided by majority rule. This has been applied in two ways. First, if a type is predominant in two versions but not in the third version, then the type from the two versions was marked as a predominant type. Second, if two types are tied in two versions, but one of them is predominant in the third version, then the type that is predominant in the third version was marked as a predominant type.

23 See Table 8.

24 See Table 10.

be referred to. The number of examples from the Bible was significantly larger than those from the Korean-English corpus data. The former consists of 193 examples, whereas the latter consists of 20 examples. Considering that K-Cs were categorized into 19 types, the data group with 20 examples may not demonstrate all the features of K-Cs. In other words, there is a chance that the outcome of the Korean-English corpus data may be incomplete. The outcome may change when the number of examples increases. Thus, the Bible seems to be large enough to exhibit stable features of K-Cs, which means that the result from the Bible may be more reliable than the one from the Corpus.

It should be mentioned, however, that examples from the Bible have limitations because its genre is specific to that of biblical texts. Thus, although the number of the Korean-English corpus data is not large, this data group will also be referred to throughout the following section.

5. Analysis of the data

Thus far, we have illustrated the results of the retrieved Korean and Korean-English data. The findings showed that GRPs are rarely used in naturally occurring Korean and that E-RCs are unlikely to be expressed as a genitive RC in Korean. Having described the data in Section 4, we analyze the data in Section 5. We examine the frequent representing strategy adopted in K-Cs and explain why the strategy appeared often. Also, GRPs from the KNC and the Bible are investigated focusing on how RPs are expressed and whether the original language of the Bible causes GRPs in the K-Cs.

5.1 Representing strategy

5.1.1 Avoiding genitive RCs

Both in the Korean-English Corpus and the Bible, E-RCs were transferred into Korean in ways that avoid genitive RCs. The agreement between both data sets in avoiding genitive RCs along with the small number of genitive RCs in the Contemporary Korean Written and Spoken Corpora suggest that Korean

users tend to find genitive RCs unnatural in everyday language, even though they may be grammatically correct. When E-RCs remain in an RC form, the “Paraphrased” strategy, in which the head noun of an E-RC does not hold a genitive role in an RC, appeared most frequently. Otherwise, E-RCs were expressed in a non-RC form. The case in which an E-RC was expressed as a GRP in a K-C was extremely rare. The GRP-avoidance tendency in Korean can now be investigated in detail.

To begin with, “Paraphrased” was most frequent in “RCs” both in the Corpus and the Bible. In “Paraphrased”, the head noun of the E-RC has a grammatical role in an RC other than a genitive. In (26b), for instance, the head noun *ca* ‘man’ has a subject role in the RC.

- (26) a. E-RC
each man [whose heart prompts him to give]
 (Old Testament [NIV])
- b. K-C
 [*kippu-n* *maum-ulo* *ray-nu-n*] *ca*
 pleasing-REL.REAL heart-COM give-IMPF-REL.REAL man
 ‘A man who gives with pleasing heart’
 (Old Testament [KK])

When the grammatical role of the head noun of an E-RC is transferred to a non-genitive role, the AH, given in (27), accurately describes the grammatical role into which the head noun of the E-RC is moved.

(27) SUB > DO > IO > OBLQ > GEN > OCOM

Examples in which the head noun of an E-RC is expressed as a subject NP in a K-C were most frequent, followed by examples in which the head noun of an E-RC is expressed as an object NP.²⁵ The result shows that when an E-RC

25 The tendency for English genitive RCs to be translated into Korean as subject or object RCs is consistent with findings from Cantonese. Francis et al. (2015) employ an elicited production task that is designed to elicit RCs. They find that more than half of productions used a subject or object RC rather than a genitive RC to express sentences with possessive meaning. When

was expressed with an RC form in a K-C, it is preferred to transfer the genitive role of the head noun into a subject or object role. This coincides with the AH regarding the accessibility of an NP to relativization. In other words, in “Paraphrased”, the head noun of an E-RC was transferred into a grammatical position on the AH that is more accessible to relativization.

The fact that NON-RCs exist is itself further evidence for the avoidance of genitive RCs. E-RCs were expressed as “NON-RCs” in order to avoid genitive RCs. The benefit of adopting a NON-RC form is that in “NON-RCs”, the head noun of an E-RC can be expressed either as a genitive or a non-genitive. In the Corpus, the head noun of an E-RC was expressed as a non-genitive NP slightly more often than a genitive NP, and in the Bible, it was expressed as a genitive NP more frequently. We can examine the examples below. The head nouns of the E-RCs are bolded in the K-Cs.

(28) a. E-RC

Some time later, he fell in love with a woman in the Valley of Sorek whose name was Delilah

(Old Testament [NIV])

b. K-C

<i>kulen</i>	<i>hwu</i>	<i>ku-nun</i>	<i>Sorek</i>	<i>kolccaki-uy</i>	<i>han</i>	<i>yeca-wa</i>
after	that	he-TOP	Sorek	valley-GEN	one	woman-COM
<i>salang-ey</i>	<i>ppaci-ess-supnita</i>	<i>kunye-uy</i>	<i>ilum-un</i>			
love-LOC	fall-PST-DEC	she-GEN	name-TOP			

Delilah-i- Øpnita

Delilah-COP-PRS-DEC

‘After that, he fell in love with a woman from the Valley of Sorek.

Her name is Delilah.’

(Old Testament [WM])

(29) a. E-RC

But the wicked are like the tossing sea, which cannot rest, whose waves cast up mire and mud

participants did use a genitive RC, however, they usually inserted an RP.

(Old Testament [NIV])

b. K-C

<i>kulena</i>	<i>akin-tul-un</i>	<i>yotongha-nu-n</i>	<i>pata-wa</i>
but	the wicked-PL-TOP	tossing-IMPF-REL.REAL	sea-COM
<i>kath-ase</i>	<i>koychi</i>	<i>swi-ci</i>	<i>mosha-ni</i>
alike-because	still	take a rest-CONVERB	NEG-and
<i>sengna-n</i>	<i>pata-nun</i>	<i>cinhulk-kwa</i>	<i>telep-n</i>
tossing-REL.REAL	sea-TOP	mud-and	dirty-REL
<i>kes-ul</i>	<i>sos-a</i>	<i>dli-l ppwun-i-Ø-ta</i>	
thing-ACC	rise-LNK	raise-only-COP-PRS-DEC	

'But the wicked is like a tossing sea, so he cannot take a rest quietly as a tossing sea only raises up mud and dirty things.'

(Old Testament [PS])

The examples given in (28b) and (29b) show the flexibility in expression of the head noun of an E-RC in a K-C with respect to its grammatical role. (28b) is an example of "M disconnected from R" in which an E-RC is transferred to an independent clause in a K-C. The head noun of an E-RC, a woman, appears as a genitive in the independent clause as *kunye-uy* 'her'. (29b) is an example of "M linked to R". In this example, the main clause of an E-RC is transferred into an adverbial clause and then linked to the E-RC, which is transferred into a main clause. The head noun of the E-RC in (29a), the tossing sea, appears as a topic NP, *sengna-n pata-nun* 'as for the tossing sea', in the main clause. In addition to simply avoiding a genitive RC, this flexibility in expression of the head noun's grammatical role in an E-RC seems to explain why a non-RC form is adopted as an alternative construction for a genitive RC.

Our finding that genitive RCs are avoided accords with other studies. Works such as Keenan and Hawkins (1987), Hawkins (1999), Diessel and Tomasello (2006), and Hawkins (2014) point out that corpus frequencies decline down the hierarchy. Correspondingly, processing loads and the demands of working memory have been shown to increase under experimental conditions for positions that are lower on the AH.²⁶ It is not surprising that a genitive position,

²⁶ See Hawkins (1994; 2014) for further discussion of the ways in which the ease of processing

a lower position on the AH and one that requires the non-primary strategy in Korean, is only found in a few cases or is simply replaced by non-genitive RCs or non-RC constructions, which are easier to process.

5.1.2 Preference for “Linked clauses” among “NON-RCs”

When the non-RC form was adopted, “Linked clauses” appeared most frequently among “NON-RCs” both in the Corpus and in the Bible. To explain the high frequency of “Linked clauses”, we need to refer to the semantic type of clause-linking: “Background” appeared most frequently. The two clauses in “Background” can be linked to each other without adding any extra meaning such as cause or purpose. Further, one clause can be linked to another in a way that adds information to an NP or an event described in the other clause. When it is an NP that is elaborated, the two clauses in “Background” functionally/semantically resemble an RC and main clause. As a restrictive RC provides information about the head noun so that the referent of the head noun can be identified and a non-restrictive RC adds extra information to the already identified head noun, so a construction that is functionally/semantically similar to an RC is chosen to transfer the meaning/function of an E-RC when an E-RC is expressed in a non-RC form. In this way, linked clauses enable Korean users to avoid genitive RCs while using a functionally/semantically similar construction.

Our findings support the argument that there are polysemous constructions in Korean spanning an RC and an adverbial clause. J.-E. Lee (2017b), for instance, suggests linked clauses marked by *-nuntey* (the *nuntey* clause) as a construction that can function as an RC.²⁷ Using Dixon’s (2009) categorization of semantic types of clause-linking, she re-examines the semantic type of “Background” that is encoded with clause conjunctive markers such as *-nuntey* and shows that the semantic types in “Background” can be further subcategorized. One of these subcategories is the semantic type of “NP Elaboration”. Arguing that NP Elaboration is a link between an adverbial clause

information decreases as structural complexity increases.

27 J.-E. Lee (2017b) further suggests that the meaning/function of extraposed RCs can be expressed by the *-nuntey* clause. See S.-H. Lee (2019) for the discourse function of extraposed RCs.

and an RC, she describes how NP Elaboration compensates the restrictions of prenominal RCs in Korean. As Table 21 shows, when E-RCs were expressed as linked clauses in Korean “Background” was highly preferred and within “Background” the conjunctive marker *-nuntey* was predominant.

Our findings also support other studies of English-Korean translation of English genitive RCs. For instance, to translate English genitive RCs into Korean, Y.-O. Lee (2004: 162) points out that there is no corresponding construction to English genitive RCs in Korean and suggests using linked clauses or paraphrasing genitive RCs into non-genitive RCs.²⁸ In the same vein, J.-S. Choi and K.-S. Park (2009) conclude that genitive RCs tend to be translated in a non-RC form. They explain this tendency by appealing to the desire to avoid the structurally complex sentences that a genitive RC can cause. A genitive NP is recognized by a genitive particle *-uy*, which may make the modifying structure complicated (J.-S. Choi and K.-S. Park 2009: 145).

In addition to avoiding a genitive RC due to its complex structure, our findings provide the reason why conjunctive markers such as *-nuntey* are often used in English-Korean translation of English genitive RCs. For instance, Y.-O. Lee (2004) gives (30) as an example of how an English genitive RC can be aptly translated into Korean.

- (30) a. English genitive RC
She makes a pastry whose preparation takes an entire day.
- b. Korean translation
- | | | | | |
|------------------|-----------------------|--------------|----------------------|--------------------|
| <i>kuney-nun</i> | <i>ppangkwaca-lul</i> | <i>cal</i> | <i>mantul-nuntey</i> | |
| she-TOP | bread-ACC | well | make-and | |
| <i>kuke-l</i> | <i>mantul-lyemen</i> | <i>halwu</i> | <i>congil</i> | <i>kelli-Ø-nta</i> |
| it-ACC | make-PURP | a day | all day | take-PRS-DEC |
- (Y.-O. Lee 2004: 162)

In (30b), the clause marked by *-nuntey* introduces a referent, *bread* and it is elaborated in the main clause without adding any additional meaning such as purpose or reason. As we have shown at the beginning of this section, the two

²⁸ Y.-O. Lee (2004) does not include the pronoun-retention strategy in her study.

linked clauses in (30b) are semantically/functionally similar to the relation between an RC and main clause in that one of the linked clauses provides information about an NP. In light of the semantic/functionality similarity to an RC, linked clauses with a conjunctive marker such as *-nuntey* can be adopted as an alternative construction to an RC, providing the supporting rationale behind the helpful observations of Y.-O. Lee (2004).

5.2 Analyzing GRPs

5.2.1 Expression of RPs

Despite the tendency to avoid genitive RCs in Korean, GRPs have been found from the Korean data and the Korean-English data. It remains to account for these pronouns. The details of the collected GRPs are given in Table 24.

Table 24: Total GRPs in the collected data

RPs	Number of GRPs		
	The Korean data	The Korean-English data	
	The Contemporary Korean Corpus	The Korean-English Parallel Corpus	The Bible
Personal pronouns	3	-	9
Reflexive pronouns	2	-	1
Demonstrative pronouns	5	1	14
Total	10	1	24

The first matter to observe in Table 24 is that the proportion of demonstrative pronouns is significantly higher. A demonstrative pronoun was used as an RP in 50% of the Korean data, and 60% of the Korean-English data. Although the number of GRPs is too small to discuss any tendency, this number seems to reflect the avoidance of using personal pronouns in Korean. In fact, J.-H. Park (2007: 119-120) argues that the Korean language can be classified as a two-person language in which third-person pronouns do not have a firm status.

What are generally referred to as third-person pronouns such as *ku* ‘he’ and *kunye* ‘she’ appeared in the 20th century. These pronouns are rarely used in spoken language and are primarily used in specific genres of written language such as a novel. The newly made status of third-person pronouns might contribute to the awkwardness of a genitive RC in which a personal pronoun is taken as an RP. This point is supported by the fact that most literature on GRPs in Korean provides examples in which a reflexive pronoun is used as an RP. Tagashira (1972), for instance, suggests (31) as an example of a genitive RC in Korean in which a reflexive pronoun is used as an RP. (31) has been cited with slight revision by others (Keenan and Comrie 1977: 74; Song 1991: 196, 2003: 156; Yeon 2012: 422).

- (31) *caki-uy* *kay-ka* *chongmyengha-n* *Hyensik*
 self-GEN dog-NOM smart-REL.REAL Hyensik
 ‘Hyensik, whose dog is smart’
 (Tagashira 1972: 219)

Indeed, when examining Korean GRPs, Song (2003) investigates only examples in which a reflexive pronoun is used as an RP. The reflexive pronoun *caki-uy* ‘self’ is used as an RP throughout Song’s article.

In this section, we have argued that using a personal pronoun seems to cause more awkwardness as an RP than using a reflexive pronoun. We found, however, that the proportion of GRPs in which a reflexive pronoun is used is the lowest. This seeming contradiction can be better understood by observing the optionality of RPs in Section 5.2.2 and translation interference in Section 5.2.3.

5.2.2 Optionality of RPs

In the GRPs from the Korean data and the Korean-English data, RPs appeared in 35 examples, but they were optional in 90% of the Korean data and in 68% of the Korean-English data.²⁹ Table 25 demonstrates the details of the optionality of RPs in the collected GRPs.

²⁹ An RP was judged as optional when the sentence is grammatical without it.

Table 25: Optionality of RPs

RPs	Number of GRPs with an optional RP/Total number of GRPs		
	The Korean data	The Korean-English data	
	The Contemporary Korean Corpus	The Korean-English Parallel Corpus	The Bible
Personal pronouns	2/3		5/9
Reflexive pronouns	2/2		1/1
Demonstrative pronouns	5/5	1/1	10/14
Total	9/10	1/1	16/24

From the 10 Korean data, non-optional RPs were used in only one example. This example is given in (32).

- (32) *Cayukensel-i-la(ko ha)-nun hoysa ilum-to*
 Cayukensel-COP-DEC-QUOTQUOTVERB-REL company name-INCL
sayngsaha-ko ku-uy ilum-to cwungangmwutay-eyse-nun
 unfamiliar-and he-GEN name-INCL central stage-LOC-TOP
pyello allieci-ci anh-un innmwul-i-ki
 not very be known-CONVERB NEG-REL.REAL figure-COP-
taymwun-i-Ø-ta
 because-COP-PRS-DEC
 ‘(It is) because he is a figure whose name is not well known at a central stage and the name of the company called Cayukensel is not well-known.’
 (Contemporary Korean Corpus)

In (32), the personal pronoun *ku-uy* ‘his’ is co-referential to the head noun *innmwul* ‘figure’. (32) is unacceptable without *ku-uy* ‘his’. In this sentence, however, it is doubtful that the RP *ku-uy* ‘his’ is demanded to make it easy to process the RC in (32). Rather, the pronoun *ku-uy* ‘his’ in the RC seems to appear as a part of a parallel expression, that is, in (32) *ku-uy ilum* ‘his name’ is paralleled to *hoysa ilum* ‘company name’. As we can see in (33), without the parallel expression *Cayukensel-i-la(ko ha)-nun hoysa ilum-to sayngsaha-ko* ‘the name of the company called Cayukensel is not well-known’, the RC in (33) would be well-formed without

having the RP *ku-uy* 'his'.

- (33) *ilum-i* *pyello* *allieci-ci* *anh-un*
 name-NOM not very be known-CONVERB NEG-REL.REAL
innmul
 figure
 'A figure whose name is not well known'

Since the RC in (33) is grammatical, the RC in (32) may not be a strong example of an RC with an obligatory RP, even though the RC in (32) can be regarded as an RC with an RP.

Turning to the Korean-English data, the proportion of optional RPs was lower than the one in the Korean data. In 17 out of 25 examples, RPs were optional. The optionality rate was the lowest in the examples in which personal pronouns were used as RPs. Furthermore, there are differences among the Bible versions regarding the proportion of the optionality of RPs. The optionality rate of RPs was relatively low in the KK and high in the WM and the PS. RPs were optional in six out of 12 sentences in the KK, in nine out of 11 in the WM, and in one out of one in the PS. Examples of optional and non-optional RPs are given in (34a) and (34b) respectively.

- (34)³⁰ a. Optional RP
caki *cip-i* *namccok-i-n* *salam*
 self house-NOM south-COP-REL.REAL man
 'A man whose house is toward the south'
 (Contemporary Korean Corpus)
- b. Non-Optional RP
wang-i *ku-uy* *san-ey*
 king-NOM he-GEN hand-LOC
uyciha-yess-te-n *ku-uy* *cangkwang-ul*
 lean-PST-PST.IMPF-REL.REAL he-GEN general-ACC
seywu-e *sengmun-ul* *cikhi-key ha-yess-teni*

put up-and city gate-ACC keep-CAUS-PST-and
 'The king_i put up his_i general_j on whose_j hand (he_i) leaned and had
 (him_i) to keep the city gate.' Lit. '*The king_i put up his_i general_j that
 he_j leaned on his_j hand and had (him_i) to keep the city gate.'
 (Old Testament [WM])

In short, RPs in the GRPs are highly optional, though the RPs from the Korean data show higher optionality than those from the Korean-English data. The high optionality of RPs means that the RPs might not be used to deal with formal restriction in relativizing a genitive noun. When an RP is optional, there is a chance that it might not be a GRP but a non-genitive RC such as a subject RC or a topic RC. As shown in Section 3.1.2, we do not regard a construction as a GRP, if an NP can be relativized only when it has non-genitive RC correspondence. However, another paper might examine the usage of optional RPs with a focus on their pragmatic functions, such as emphasis.³¹

In the following section, we discuss translation interference on GRPs. It is possible that translation interference may account for why personal pronouns in GRPs are less optional in the Korean-English data. The Bible provides 96% of the RPs from the Korean-English data. Translation interference may also account for why we find examples in which personal pronouns are used as RPs even when it sounds unnatural (Section 5.2.1).

5.2.3 GRPs and translation interference

30 The example in (34a) is given in (11) as well.

31 Based on the observation made in J.-H. Park (2007; 2009), H.-G. Jeong (2015), argues that reflexive pronoun *casin* 'self' is used for emphasis, and this property is similar with the English reflexive N-self. However, he insisted that another Korean reflexive *caki* 'self' does not have this usage and its interpretation prefers the long distance binding which is different from the English reflexive. Accepting the two paths of development of reflexives described in Kemmer (1993), he explains the difference between *casin* and *caki* with that the former was developed from the intensifier, and the latter, from the logophoric reflexive marker. In our data, however, reflexive pronouns are used as an RP only in three examples out of 35 GRP examples. Thus, studies on personal pronouns and demonstrative still should be made to examine whether they are used for pragmatic reason such as emphasis.

In Section 4.2, we have shown that comparatively more GRPs have been found from the Bible: 11 examples were found from the KNC and 24 examples from the three Bible versions.³² To explain why GRPs were found more frequently from the Bible, we can refer to the way that the examples from the Bible were produced. The K-Cs from the Bible are the result of translation. Thus, they may have been affected by another language such as Hebrew, Greek, or English. Biblical Hebrew and Ancient Greek are the languages of the original Bible text, and English translation versions have been consulted when Korean translations were made.

There are two possible ways in which these languages can interfere with the way in which their Korean counterparts are produced. First, Biblical Hebrew³³ and Ancient Greek³⁴ allow the pronoun-retention strategy for genitive RCs. Examples of GRPs from Hebrew and Greek Bible versions are given in (35) and (36) respectively. The RCs are bracketed and both head nouns and RPs are bolded.

- (35) *'et-haššālīš; ['āšer nis' ān;]*
 DEF.ACC-officer REL lean.PF.M.3.SG
'al-yād-ō;]
 on-hand-GEN.M.3.SG
 'The officer_i on whose_i arm (he_i) leaned'
 (Old Testament)

- (36) *pantes hoi kataikountes epi*
 all.NOM.M.PL DEF.NOM.M.PL inhabitant.NOM.M.PL on
tēs gēs [hou ou
 DEF.GEN.F.SG earth.GEN.F.SG REL.GEN.M.SG not
gegraptai to onoma

32 The total number of words in the KNC that were searched for our purpose is 11,454,102 words, while those of the three Korean Bible versions totaled about 1,394,325. The approximate number of words in the three Korean Bible versions were counted as follows: the number of words in the KK was counted by MS word, and the number has been multiplied by three.

33 See Holmstedt (2016: 135-142) for the pronoun-retention strategy for Biblical Hebrew.

34 Ancient Greek allows the relative-pronoun strategy along with the pronoun-retention strategy for a genitive position (Bakker 1974; Mot 2015: 209-212). On Modern Greek, see Joseph (1983).

write.PERF.PASS.IND.3SG DEF.NOM.NEUT.SG name.NOM.NEUT.SG
autou en tō bibliō
 3.GEN.M.SG in DEF.DAT.NEUT.SG book.DAT.NEUT.SG
tēs zōēs tou
 DEF.GEN.F.SG life.GEN.F.SG DEF.GEN.NEUT.SG
Arniou]
 lamb.GEN.NEUT.SG
 ‘All the inhabitants on the earth whose names have not been written in
 the Lamb’s book of life’
 (New Testament)

It is possible that the literal translation of Hebrew and Greek Bible versions into Korean might have led to more GRPs. Further investigation, however, shows that Hebrew and Greek versions of the Bible may not cause GRPs in Korean to a great degree. Hebrew and Greek examples that correspond to Korean GRPs from the Bible show GRPs only in seven (as in [33] and [34]) out of twenty-four examples. This finding shows that GRPs are not translated passively in Korean. GRPs, however, should not be regarded as a natural form in Korean. There was, for instance, only one GRP in the PS, whose focus was on translating the original text with natural Korean. If a GRP is not a common grammatical structure employed in Korean, we can guess that there may be translation interference from an additional source to Hebrew and Greek.

The most likely culprit for translation interference is English. The genitive relative pronoun whose (or of which/of whom) in English is likely to be translated as a pronoun in Korean. Since in English the genitive relative pronoun is directly followed by the genitive-modified noun, the relative pronoun seems to be translated as a pronoun along with the following noun. We can examine (37).

- (37) a. E-RC
Was it not with those who sinned, whose bodies fell in the desert?
 (Old Testament [NIV])
 b. K-C

kutul-uy sichey-ka kwangya-ey eptuleci-Ø-n
 they-GEN corpse-NOM wildness-LOC fall down-PFV-REL.REAL

pemcoyha-Ø-n ca-tul-eykey-ka ani-Ø-nya?
 sin-PFV-REL.REAL people-PL-DAT-NOM COP.NEG-PRS-INTER

'Isn't it for those who committed sin, whose corpses fell down in the wildness?' Lit. '*Isn't it for those that their corpus fell down in the wilderness, who committed sin.'

(Old Testament [KK])

In (37), whose in the E-RC is expressed as *ku-tul-uy* 'their' in the K-C followed by the noun that is modified by the relativized genitive.³⁵ These translation interferences seem to result in more GRPs in the Bible.

6. Conclusion

In this study, we have considered whether GRPs are found in Korean. The result showed that GRPs are extremely rare; only 10 examples were found in the entire Contemporary Korean Corpus. To examine how Korean transfers the meaning of genitive RCs, E-RCs to K-Cs have been investigated throughout the Korean-English Parallel Corpus and the Bible. The findings showed that E-RCs were expressed in K-Cs in such a way as to avoid genitive RCs. That is, E-RCs were often transferred into K-Cs either as non-genitive RCs or NON-RCs. When E-RCs were transferred into NON-RCs, a linked clause was preferred. Even when RPs were used in genitive RCs, they were highly optional. Moreover, RPs may be a result of translation interference.

It may also be helpful to acknowledge areas of weakness in the present study as well as to anticipate future areas of study to which this research can be applied. The chief shortcoming of this paper has to do with the scope of GRPs available in the corpora that were employed. The number of GRPs from the Korean-English Parallel Corpus was limited in comparison to those that we found from the biblical data. However, this limitation leads to the first area of

³⁵ It is also worth noting that the RP in (37b) is not optional.

future study. The results of this paper can be further examined by making use of a larger Parallel Corpus. The findings of this study can also be extended to Chinese and Japanese. On the one hand, Chinese is one of the few languages that is known to use the prenominal RC as well as the pronoun-retention strategy. On the other hand, although Japanese has the same SOV word order and rich conjunctive markers as Korean, Japanese may or may not have a polysemous construction like the *-nuntey* clause in Korean, which can be used as an alternative construction for an RC. Considering these points, investigating Chinese and Japanese counterparts to English genitive RCs may show instructive points of similarity and difference in both RC formation and the treatment of its formal limitations across Korean, Chinese, and Japanese.

In short, the findings of this study suggest that Korean can deal with restrictions on RC formation by adopting non-RC constructions. When a genitive NP cannot be relativized by the primary strategy, an RC form can be abandoned. It is unlikely for Korean to make an effort to relativize a genitive NP by using the non-primary strategy because this sounds unnatural. Rather, Korean adopts linked clauses to express an RC meaning/function. It seems fitting that Korean, a language with “a dauntingly rich repertoire of clause linking devices” (Dixon 2009: 53), uses linked clauses to express an RC meaning/function.

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Received: 2020. 04. 13.

Revised: 2020. 05. 26.

Accepted: 2020. 06. 03.