Exploring the Reference Requirements for Relativization with Special Reference to Korean[*]

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ABSTRACT

This study reveals that case-recoverability is not enough to explain the unrelativizability of an NP and suggests the concept of reference value as another factor that affects its unrelativizability. In previous studies, case-recoverability has been primarily discussed as a requirement for RC-formation. However, there are Korean examples of RCs that turn out ungrammatical, even when the case of the head noun in an RC is recoverable. This paper revisits the referential feature of an NP and proposes that the concept of reference value helps to explain the relativizability of an NP. Reference value denotes a feature of an NP that has a corresponding index in the reference tier as described in Jackendoff (2002). With the concept of reference value, Korean RC examples are revisited whose unrelativizability cannot be explained with case-recoverability. The findings show that Korean reference value is a prerequisite for relativization: if an NP does not have reference value, it cannot be relativized regardless of its case-recoverability.

Keywords: relative clauses, case-recoverability, Korean, referential tier, reference value

1. Introduction[1)]

The RC construction consists of a head noun and an RC. The semantic function of the head noun is to establish a set of entities, which may be called the domain of relativization (Keenan and Comrie 1977: 63, J. J. Song 2001: 211). The function of an RC is to provide information about the head noun. The information given by an RC either assists in focusing – or restricting – the reference of the head noun or adds further background about the head noun which is already uniquely identified

(Dixon 2010: 314). When the information given in an RC restricts the reference of the head noun, the RC is called a restrictive RC, and when it provides additional knowledge about the head noun, the RC is referred to as a non-restrictive RC. We can examine English RCs in (1) below.

(1) a. *My sister who lives in Seoul will visit me this Christmas.*
    b. *My sister, who lives in Seoul, will visit me this Christmas.*

In (1a), the NP, *my sister*, is the head noun, and its referent is narrowed by the RC. With the RC, the referent of *my sister* is restricted to the one who lives in Seoul. With a comma after the head noun, however, the function of the RC in (1b) is different from the one in (1a).[2] The RC in (1b) does not restrict the referent of the head noun; the speaker supposes that the audience can identify the referent of the head noun. Rather, it gives additional information about the head noun. With the RC, the sentence in (1b) implies that the speaker has a single sister or that the listener already knows the precise referent of *my sister*. In this case, the RC does not identify but functions descriptively by providing additional information about the speaker's sibling (Whaley 1997: 260).

In English, two types of RCs, that is, a restrictive RC and a non-restrictive RC, are distinguished from each other by a comma along with intonational differences. However, this is not the case for all languages. According to Dixon (2010, pp. 352-353), the two types of RCs can also be differentiated by the position of the RC and the head noun as in Amele, by using a different marker for each type of RC as in Persian, or by prosodic features as in Hausa. Some languages even appear to make no formal distinction between restrictive and non-restrictive RCs, the interpretation relying entirely on pragmatic matters (Dixon 2010: 352). In Mojave, for instance, there is no structural or intonational difference, but for non-restrictive RC construction, the head noun is to have definite referents (Munro 1976: 205-207). Further, in Kambera, Manambu, and Jarawara, all RCs are of the restrictive type (Dixon 2010: 352). In Dhaasanac, coordination is used for what would be expressed by a non-restrictive RC construction in other languages (Tosco 2001: 282). In the case of Korean, the key language of this paper, there is no formal distinction between a restrictive RC and a non-restrictive RC. However, further examination is required to determine whether a pause is mandatory between the head noun and a non-restrictive RC, which must be left for another paper.

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2) Within speech, the distinction between the RC and the main clause is made through prosody.

As previous studies have pointed out, 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; Givón 1979; Maxwell 1979; Lehmann 1986; Comrie 1989; Croft 1990; J. J. Song 2001). This is described well in Keenan and Comrie (1977). Examining about fifty languages, Keenan and Comrie (1977) argue that there is a regular pattern according to which grammatical relations may or may not be relativized; they refer to this pattern as the Accessibility Hierarchy (AH).

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

What the AH shows is that if an NP has a subject role in a clause, it is more accessible to relativization than an NP that has the grammatical role of a direct object. Further, an NP with a direct object role is more accessible to relativization than an indirect object. Similarly, it is easier to relativize an indirect object than to relativize an oblique, and so on down the hierarchy. What ought to be pointed out is that every language should be able to relativize a subject. Thus, all languages must have an RC-forming strategy for a subject, referred to as the primary strategy by Keenan and Comrie (1977: 68). If the primary strategy in a language can apply to one position on the AH, it must apply to all higher positions. The primary strategy may cease to apply at any point on the AH. Keenan and Comrie (1977) explain the regular pattern in RC formation described in the AH with reference to psychological accessibility. They argue that the AH reflects the psychological ease of comprehension. The lower a position is on the AH, the harder it is to figure out the position in which an RC is formed (Keenan and Comrie 1977: 88).

However, case-recoverability of the head noun in an RC does not ensure the relativizability of an NP. Even when the grammatical role of the head noun in an RC is recoverable, the RC may still be unacceptable. Examples of such cases can be found in Korean. Therefore, this paper will look for an explanation as to why an NP fails to be relativized even when its grammatical role is recoverable. The following article will undertake this project with special reference to Korean examples and is outlined in three sections.

First, Korean RC examples are examined to show that case-recoverability has explanatory limitations when it comes to determining the relativizability of an NP.

The second section defines reference value using Jackendoff (2002) and suggests that reference value is a factor affecting RC formation along with case-recoverability. Finally, Korean RC examples are re-examined using the concept of reference value. This article argues that reference value offers a complementary way to determine whether an NP may be relativized along with case-recoverability.

2. Korean RCs and Explanatory Limitation of Case-recoverability

Korean forms RCs by using the gap strategy to relativize a subject, an object, and some oblique NPs. In the gap strategy, an NP that refers to the head noun, is deleted from the RC along with its case particle. Let us examine the RC in (2a).

(2) a. *pata-lul*　　　*cohaha-nun*　　　*chinkwu*
　　　sea-ACC　　　like-REL　　　friend
　　　'a friend who likes the sea'
　　b. *ku*　　　*chinkwu-ka*　　　*pata-lul*　　　*cohaha-nta.*
　　　the　　　friend-NOM　　　sea-ACC　　　like-DEC
　　　'The friend likes the sea.'

The relativized noun *chinkwu* 'friend' in (2a) is gapped from the RC with the nominative case particle *-ka*. To retrieve the gapped NP, one can refer to the verb. The transitive verb *cohaha-* 'like' in the RC can have a subject and an object as given in (2b). With an object in the RC, the role of the head noun in the RC is assumed to be a subject.

The gap strategy does not apply to all oblique NPs. For instance, an RC formed with an oblique NP (oblique RC) in (3a) is not acceptable when the comitative NP is relativized with the gap strategy.

(3) a. * *John-i*　　　*san-ey*　　　*ka-n*　　　*Mary*
　　　John-NOM　　mountain-to　　go-REL　　Mary
　　　'Mary, with whom John went to the mountain'
　　b. *John-i*　　　*Mary-wa*　　　*san-ey*　　　*ka-ass-ta.*
　　　John-NOM　　Mary-with　　mountain-to　　go-PST-DEC
　　　'John went to the mountain with Mary.'

To understand when an NP with an oblique case particle can be relativized, M-G Kim (2010) begins by dividing an NP with an oblique case particle into the categories of oblique and adjunct. He argues that an oblique cannot be relativized when the grammatical information of its case particle is significant and that an adjunct is unrelativizable except for cases where it stands for a time, a place, or an instrument. Specifically, he explains the unrelativizability of an oblique NP with the concept of low case-recoverability. In other words, he argues that if the case particle of an oblique NP is highly informational, it is difficult to retrieve when it is deleted along with the head noun. The same is true for the case particle of an adjunct apart from temporals, locatives, and instruments. For instance, the oblique NPs in (4b) and (5b) are not relativizable, so the RCs in (4a) and (5a) are unacceptable.

(4) a. * *yenghi-ka*　　　*caphi-n*　　　*chelswu*
　　　　Yeonghee-NOM　be caught-REL　Cheolsoo
　　　　'Cheolsoo, by whom Yeonghee was caught' (M-G Kim 2010: 150)
　　 b.　*yenghi-ka*　　　*chelswu-eykey*　　*caphi-ess-ta.*
　　　　Yeonghee-NOM Cheolsoo-by　　be caught-PST-DEC
　　　　'Yeonghee was caught by Cheolsoo.' (M-G Kim 2010: 150)

(5) a. * *yenghi-ka*　　　*senmwul-ul*　　*pat-un*　　　*chelswu*
　　　　Yeonghee-NOM　present-ACC　receive-REL　　Cheolsoo
　　　　'Cheolsoo, from whom Yeonghee received a present' (M-G Kim 2010: 151)
　　 b.　*yenghi-ka*　　　*chelswu-eykey senmwul-ul*　　*pat-ass-ta.*
　　　　Yeonghee-NOM　Cheolsoo-from present-ACC　　receive-PST-DEC
　　　　'Yeonghee received a present from Cheolsoo.' (M-G Kim 2010: 151)

M-G Kim (2010: 151) explains that the oblique NP *cheolswu-eykey* 'by Cheolsoo' is not relativizable in (4a) because the oblique case particle *-eykey* 'by' marks a demoted agent, whose function cannot be retrieved without the particle. In the same vein, he argues that the oblique NP *cheolswu-eykey* 'from Cheolsoo' is not relativizable in (5a) because the oblique NP is an optional argument of the predicate *pat-* 'receive'. That is, since the predicate does not give information about the oblique NP, it is difficult to know the grammatical role of the head noun in (5a) without the case particle *-eykey*.

He also explains the unrelativizability of adjuncts in (6b) and (7b) below with

low case-recoverability.[3],[4]

(6) a. * *namwu-ka*   *ssuleci-n*   *palam*
           tree-NOM   fall-REL   wind
           'wind by which trees fell' (M-G Kim 2010: 154)

     b.   *namwu-ka*   *palam-ey*   *ssuleci-ess-ta.*
           tree-NOM   wind-by   fall-PST-DEC
           'Trees fell by wind.' (M-G Kim 2010: 154)

(7) a. # *kutul-i*   *ka-n*   *sankil*
           they-NOM   go-REL   mountain path
           'a mountain path through which they went' (M-G Kim, 2010:154)

     b.   *kutul-i*   *sankil-lo*   *ka-ass-ta.*
           they-NOM   mountain path-through   go-PST-DEC
           'They went through a mountain path.' (M-G Kim, 2010:154)

Both the NP *palam-ey* 'by wind' in (6b) and the NP *sankil-lo* 'through a mountain path' in (7b) function as adjuncts standing for a reason and a path respectively. The meaning of the reason or path is not given by the predicate *ssuleci-* 'fall' or *ka-* 'go' but rather by the oblique case particle *-ey* or *-lo*. Without the oblique case particle, the grammatical roles of the head nouns in (6a) and (7a) cannot be recovered. Thus, they turn out to be unacceptable (M-G Kim 2010: 153−154).

As mentioned previously, M-G Kim argues that an adjunct can be relativized only when it stands for time, place, or an instrument. We can examine the examples in (8) to (10).

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3) The example in (7a) is acceptable when the head noun stands for a place instead of a path.

4) One anonymous reviewer provided sentences in [1] below to show there are examples where the head noun can represent path.

    [1] a. *kutul-i*   *ka-n*   *kil-i*   *oylop-ci anhass-ta.*
         they-NOM   go-REL   way-NOM   be lonely-NEG-DEC
         'The way that they (chose to) go was not lonely.'
      b. *kutul-i*   *sengkong-ul*   *hyangha-a*   *ka-n*   *kil-ul*
         they-NOM   success-ACC   toward-LNK   go-REL   way-ACC
         salphi-e po-ca.
         examine-try out-jussive
         'Let's examine the way that they went through for success.'

    It is doubtful, however, that the head noun *kil* 'way' represents the same path as in (7). Rather, it seems to be used metaphorically from the expression of *kil-ul ka-ta* 'way-ACC go-DEC' in which *kil* 'way' means a way of life.

(8) a. *yenghi-ka*   *ttena-n*   *kunal*   *ohwu*
       Yeonghee-NOM   leave-REL   that day   afternoon
       'afternoon on that day when Yeonghee left' (M-G Kim 2010: 139)

    b. *yenghi-ka*   *kunal*   *ohwu-ey*   *ttena-ass-ta.*
       Yeonghee-NOM   that day   afternoon-on   leave-PST-DEC
       'Yeonghee left on the afternoon of that day.' (M-G Kim 2010: 139)

(9) a. *chelswu-ka*   *wuntong-ul*   *ha-n*   *wuntongcang*
       Cheolsoo-NOM   exercise-ACC   do-REL   playground
       'the playground in which Cheolsoo did exercise' (M-G Kim 2010: 139)

    b. *chelswu-ka*   *wuntoncang-eyse*   *wuntong-ul*   *ha-ess-ta.*
       Chelsoo-NOM   playground-in   exercise-ACC   do-PST-DEC
       'Cheolsoo did exercise in the playground.' (M-G Kim 2010: 139)

(10) a. *apeci-ka*   *mwul-ul*   *masi-n*   *khep*
       father-NOM   water-ACC   drink-REL   cup
       'the cup with which (my) father drank water' (M-G Kim 2010: 139)

    b. *apeci-ka*   *khep-ulo*   *mwul-ul*   *masi-ess-ta.*
       father-NOM   cup-with   water-ACC   drink-PST-DEC
       '(My) father drank water with the cup.' (M-G Kim 2010: 139)

The NP with an oblique case particle stands for time in (8), a place in (9), and an instrument in (10). M-G Kim explains that an adjunct of time, place, or instrument can be relativized because pragmatic knowledge helps to retrieve the grammatical role of the head noun (M-G Kim 2010: 154-155). He argues that temporals and locations are more retrievable than other adjuncts because every action has a time or a place as its background (M-G Kim 2010: 154). In the same vein, he suggests the examples in (11) and (12) to support his argument that pragmatic knowledge helps to retrieve an instrument role for the head noun.

(11) a. *nay-ka*   *meystwayci-lul*   *sanyangha-n*   *chong*
       I-NOM   boar-ACC   hunt-REL   gun
       'the gun with which I hunt the boar' (M-G Kim 2010: 155)

    b. *nay-ka*   *chong-ulo*   *meystwayci-lul*   *sanyangha-ess-ta.*
       I-NOM   gun-with   boar-ACC   hunt-PST-DEC
       'I hunted the boar with a gun.' (M-G Kim 2010: 155)

(12)[5] a. ? *nay-ka* *meystwayci-lul* *sanyangha-n* *kay*
    I-NOM   boar-ACC   hunt-REL   dog
    'the dog with which I hunt the boar' (M-G Kim 2010: 155)

   b. *nay-ka*   *kay-lo*   *meystwayci-lul* *sanyangha-ess-ta.*
     I-NOM   dog-with   boar-ACC   hunt-PST-DEC
    'I hunted the boar with a dog.' (M-G Kim 2010: 155)

Both in (11a) and (12a), the oblique NP stands for an instrument. M-G Kim argues that it is pragmatic knowledge that makes (11a) acceptable but (12a) questionable (M-G Kim 2010: 155). Pragmatic knowledge makes it clear that a gun is an instrument of hunting. However, in (12a) the head noun, a dog can be interpreted as an agent because it is animate. The dog's animacy and the possibility that it could be an agent rather than an instrument make it difficult to determine that the grammatical role of the head noun is an instrument.

Yet M-G Kim's (2010) argument about the relativizability of an oblique NP cannot explain why there is an example in which an NP is unrelativizable even though its grammatical role in the RC is recoverable. The oblique RC in (6a) (repeated in (13a) below) can be examined.

(13) a. * *namwu-ka* *ssuleci-n* *palam*
    tree-NOM   all-REL   wind
    'wind by which trees fell' (M-G Kim 2010: 154)

   b. *namwu-ka* *palam-ey* *suleci-ess-ta.*
     tree-NOM   wind-by   fall-PST-DEC
    'Trees fell by wind.' (M-G Kim 2010: 154)

Although M-G Kim (2010) suggests (13a) as an example in which low case-recoverability explains why an oblique NP cannot be relativized, the unacceptability of the oblique RC in (13a) does not seem to be caused by difficulty in determining the grammatical role of the head noun. The role of the head noun in (13a) appears to be discernible for two reasons. Considering i) what is described in the RC, that is, trees falling, and ii) the lexical meaning of the head noun, that is, wind, the grammatical role of the head noun seems to be easily recognizable as a cause. In short, examples such as (13a) show that case-recoverability does not ensure the

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5) One anonymous reviewer points out that not only (12a) but (12b) also sounds awkward for the same reason that makes (12a) sound less acceptable.

relativizability of an NP.[6)]

These examples that show the explanatory limitation of case-recoverability are not rare. The RCs given in (14) are ungrammatical even when the grammatical role of the head noun in each example can be retrieved by what the RC represents and the lexical meaning of the head noun.

(14) a. * *John-i*   *kyelsekha-n*   *tokkam*
          John-NOM   be absent (from school)-REL   flue
          '??flue because of which John was absent from school'

    b. * *tali-ka*   *mwul-ey*   *camki-n*   *hongswu*
          bridge-NOM   water-with   be submerged-REL   flood
          '??flood by which a bridge was submerged'

    c. * *John-i*   *Mary-lul*   *sam-un*   *myenuli*
          John-NOM   Mary-ACC   take-REL   daughter-in-law-as
          '*a daughter-in-law that John took Mary as'

    d. * *John-i*   *ppophi-n*   *pancang*
          John-NOM   be elected-REL   class president
          '*a class president that John is elected as.'

If an NP cannot be relativized even when its case particle is recoverable, there must be a factor affecting the relativizability of an NP other than case-recoverability.

3. Referential Tier and Reference Value

3.1. Defining reference value

In the previous chapter, we have shown that there are examples of Korean RCs whose ungrammaticality cannot be fully explained with low case-recoverability. We have also suggested that there should be another factor that affects the relativizability of an NP along with case-recoverability. This other factor can be identified when the function of an RC is taken into consideration. An RC is supposed to narrow down the referent of an unidentified NP or to give extra information about the referent of an identified NP (see Section 2). To put it differently, an RC can be formed with

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6) On the explanation for the unrelativizability of (13a), see Section 3.2 and Section 4 (especially footnote 11 and footnote 12).

an NP whose referent can be restrictive or identifiable. This referential feature of an NP can be examined in terms of the reference tier described in Jackendoff (2002).

Based on Csuri (1996), who shows how a conceptual structure can break into semi-independent tiers, Jackendoff (2002: 394-395) argues that the conceptual structure contains not only a descriptive tier but also a referential tier. The referential tier shows the entities of the referents in the sentence. He gives examples as follows.

(15) *A fox ate a grape.*

$\exists x_{FOXx} \exists yGRAPEy(EATX,Y)$

(Jackendoff 2002: 395)

(16) a. Syntax/phonology: $[_S[_{NP}$ a fox$]_1$ $[_{VP}$ ate $[_{NP}$ a grape$]_2]]$ $_3$
   b. Descriptive tier: $[_{Event}$ EAT $([_{Object}$ FOX$]_1,$ $[_{Object}$ GRAPE$]_2)]_3$
   c. Referential tier: 1   2 3
   (Jackendoff 2002: 395)

The structure of the sentence in (15) can be analyzed in multiple ways as in (16). The descriptive material consists of the predicates FOX, GRAPE, and EAT along with their functional organization, which consists of the first two being arguments of the third. The referential tier, consisting of three indices, correlates with the two Object-constituents and the Event-constituent of the descriptive tier. Indices 1 and 2 correspond to a fox and a grape, and index 3 marks the event of the fox eating the grape as a unit that can be referred to.

The referential tier, however, does not always copy the indices out of the descriptive tier. The example given in (17) below illustrates such a case.

(17) a. Syntax/phonology:
       $[_S[_{NP}$ Eva$]_1$ $[_{VP}$ became $[_{NP}$ a doctor$]_2]]$ $_3$
   b. Descriptive tier:
       $[_{Event}$ INCH $([_{State}$ BE $([_{Object}$ EVA$]_1,$ $[_{Object}$ DOCTOR$]_2)])]_3$
   c. Referential tier: 1   3
       (Jackendoff 2002: 396)

As Jackendoff (2002) points out, in the sentence, *Eva became a doctor*, there are not two separate individuals, *Eva* and *a doctor*, there is only *Eva*, of whom doctorhood is predicated. Thus, in the referential tier, there is no index corresponding to the

predicate NP *a doctor*. The sentence asserts that one individual, who is described as *Eva*, has also come to be described as *a doctor*. Since a doctor is in the place of a subject complement or a predicate NP, it does not appear in the referential tier. This captures the traditional sense in which predicate NPs are similar to adjectives. They contribute only a description, but they do not refer to a new individual (Jackendoff 2002: 396).

The consideration of predicate NPs suggests two cases in which an NP does not have a corresponding index in the reference tier. When the referent of an NP i) designates a property or ii) is semantically empty, the NP will not be indexed in the reference tier. The former case is given in (18) and the latter case is given in (19).

(18) *John is a student*.

(19) *It is sunny today*.

As a subject complement or predicate NP *a student* in (18) designates a property as we described above. The subject NP *it* in (19) does not refer to anything because it is a dummy element.[7] What should be pointed out is that when the referent of an NP designates a property as in (18), it cannot be restricted. Likewise, when the referent of an NP is semantically empty, it is not identifiable. In both cases, the NPs cannot be relativized.

In the following section, we will suggest three tests to identify whether an NP has a corresponding index in the reference tier. For a simpler reference, we will refer to the feature of an NP that has a corresponding index in the reference tier as reference value.

· An NP has a reference value if it has a corresponding index on the reference tier.

3.2. Tests for reference value

When an NP is not semantically empty, we can test whether it designates an entity or a property by using the three assessments listed below. Both the Question-answer pair as well as the tag question and left-dislocation tests are used in Mikkelsen (2005: 64-93) and Goddard and Wierzbicka (2008: 49-54) to distinguish referring and non-referring (or property) expressions. Deictic expression is mentioned in

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7) However, see Bolinger (1977) and Langacker (1991) who regard it with reference to the weather as something meaningful and referential.

Higgins (1979: 264) as a feature that is not compatible with a predicational NP.

· Question-answer pair
: An NP without reference value can be an answer to the *wh*-question *what*.
· Tag question & left-dislocation
: *It* is used to refer to an NP without reference value.
· Demonstratives
: A demonstrative is not used as a determiner for an oblique NP without reference.

The first two can be utilized for an NP that has the lexical meaning of a person, such as *a doctor*. If an NP denotes a person, a proform for that NP should represent the features of person, number, or gender. If an NP is an answer to the *wh*-question *what* and *it* can be used as an anaphor, this suggests that an NP does not designate a human referent but a property of the human referent. When an NP does not signify a person like *overwork*, however, the last test can be used because a demonstrative is not compatible with a property. In the following discussion, we will describe grammatical roles that an NP without reference value can take in a sentence and will show how the reference value tests we suggested above work. In each example, an NP without reference value is bolded.

First, an NP without reference value can appear in the place of a subject complement or an object complement. Let us examine (20) below.

(20) a. *John wants to be **a doctor***.
     b. *John regards Mary as **a princess***.

A doctor in (20a) and a princess in (20b) do not pick out an individual entity but describe the property of the subject and the object respectively. That the subject complement in (20a) and the object complement in (20b) do not have reference value can be shown by the choice of a *wh*-question answer pair. Let us examine the examples below.

(21) A: *What does John want to be*?
     B: *He wants to be **a doctor***.

(22) A: *Who does John want to be*?
     B: *He wants to be the doctor*.

(23) A: *What does John regard Mary as?*
    B: *He regards her as **a princess**.*

(24) A: *Who does John regard Mary as?*
    B: *He regards her as Princess Anne.*

A doctor can be an answer of what John wants to be but not of who John wants to be. The answer for the latter should be an NP with reference value as in (22). Unlike *a doctor* in (21B), *the doctor* in (22B) picks out an individual entity that John wants to be like. In the same vein, *a princess* in (23B) can be an answer for the question about what John regards Mary as, but not about who John regards Mary as. The answer for the latter should be an NP with reference value as in (24). *Princess Anne* in (24B) refers to an individual entity.

Second, NPs without reference value can appear in the place of an adjunct. For instance, *overwork* in (25a) and *flood* in (25b) are adjuncts standing for a cause and do not have reference value.

(25) a. *John fell because of **overwork**.*
    b. *The bridge was submerged because of **a flood**.*

When a demonstrative appears in the NP without reference value, the sentence turns out ungrammatical as in (26a) or the NP must have reference value as in (26b).

(26) a. **John fell because of that **overwork**.*
    b. *The bridge was submerged because of that flood.*

Third, the subject of specification sentences adopts an NP without reference value. Let us examine (27) below.

(27) a. ***The tallest girl in the class** is Molly.*
    b. ***The capital of Australia** is Canberra.*
    c. ***Our next speaker** is Claudia M.*
    d. ***One of my heroes** is Steve Jobs.*
    (Goddard and Wierzbicka 2008: 53)

As pointed out in Mikkelsen (2005: 108-130) and Goddard and Wierzbicka (2008: 53), the sentences in (27) have a range of semantic and syntactic properties

distinguishing them from ordinary predicational sentences such as *Molly is the tallest girl in the class*, etc. The specificational sentences appear inverted in terms of the usual phrase order in an English sentence (Goddard and Wierzbicka 2008: 53). The subject NP is not a referring expression (or does not have reference value). Instead, it represents a property, while the predicate complement is a referring expression (Goddard and Wierzbicka 2008: 53). That the subject NP in (27a) refers to a property is supported by the type of pronoun that is used in a tag-question (Mikkelsen 2005: 114-115; Goddard and Wierzbicka 2008: 53-54). Let us examine the example in (28).

(28) a. ***The tallest girl in the class is Molly***, *isn't* {*it/*she*}?
   b. *The tallest girl in the class is Swedish, isn't* {**it/she*}?
   (Goddard and Wierzbicka 2008: 53)

In (28a), the subject NP does not refer to an entity but to a property – it does not have reference value. Thus, *it*, not *she*, is used as a tag question. If the subject NP in (28a) referred to an entity, *she* would have been adopted in light of the person, number, and gender of the word *girl*. In (28b), however, the subject NP refers to an entity (or has reference value). Thus, *she*, not *it*, is used as a tag question.

3.3. Reference value and relativization

Along with case-recoverability, the reference value of an NP affects its relativizability. In previous studies, it has been assumed that an NP should have a reference in order to be relativized. Because this claim has been assumed as a presupposition for relativization, it has rarely been discussed as an independent topic.[8] Moreover, the way in which reference value and the referential feature of an NP interacts in relativization has not been discussed. This interaction will be the topic of this section. To begin with, how reference value and case-recoverability affect relativizability can be summed up as below.

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8) Examining the syntax and semantics of conventional expressions, J-H Park (2003: 372–373) mentions that an NP can be modified by an RC, when the reference of an NP exists in the conversational context, that is, when an NP is a referring expression.

· Reference value ≠ 0
a) Designating an entity: Relativizability ∞ Case-recoverability
· Reference value = 0
b) Designating a property:
  If a property can be a head noun, then Relativizability ∞ Case-recoverability
  If a property cannot be a head noun, then Relativizability = 0
c) Semantically empty: Relativizability = 0
  N.B.: '∞'='is in proportion to'

When an NP has reference value, relativizability can be affected by case-recoverability such that when case-recoverability increases, so does relativizability.

When an NP does not have reference value, it can designate a property or it can be semantically empty. In the latter case, the referent of an NP is not identifiable so it cannot be relativized. In the former case, the referent of an NP designates a property which cannot be restricted. Because a property cannot be restricted, an NP designating a property cannot be relativized, unless a property can be the head noun of a non-restrictive RC in a language. English is such a language. Let us examine this in (29).

(29) *Mary is **smart**, which John never was.* (Del Gobbo 2007: 193)

In (29), the relative pronoun *which* refers to a property described in the adjective *smart*. By allowing an adjective to be the head noun of an RC, English can offer examples in which an NP designating property is relativized as in (30).

(30) a. *John is **a gentleman**, which his brother is not.*
     b. *John regards Mary as **a fool**, which she is not.*

In (30a), the head noun *a gentleman* does not pick out an entity but a property, that is, gentleman-hood. Likewise, in (30b), the head noun *a fool* does not suggest a new entity, but it describes foolishness or the property of a fool.

It should be noted that the head nouns in (30) designate a property not only in the RCs but also in the main clauses. When an NP designates a property only in an RC, the whole sentence with the RC turns out ungrammatical as in (31).

(31) a. **A gentleman, which his brother is not, visited me last night.*
     b. **A fool, which John regards Mary as, visited me last night.*

Higgins (1979) explains the ungrammaticality of (31) due to a discord of the referential features. He argues that the referential feature of an NP should be the same both in an RC and a main clause. In the case of (31), the head nouns designate entities in the main clauses but properties in the RCs. This discord causes the sentences to be ungrammatical.

We doubt, however, that the examples in (31) are ungrammatical because of the discord of referential features. In (32), for instance, the head noun designates an entity in an RC, but a property in the main clause.

(32) a. *John is **a zoologist** who deals with animals.*
　　 b. *John regards Mary as **a maid** who takes care of the house chores.*

Although not as natural as (32), there are other examples of mismatch in the reference value of an NP between an RC and a main clause. The sentences in (33) are those in focus.[9]

(33) a. *The tallest girl in my class, who is Mary, visited me last night.*
　　 b. *The main actress of that movie, who is Ingrid Bergman, got an Oscar award in 1957.*

In (33), the head noun designates an entity in the main clause, but a property in an RC. It should be noted that the head nouns in (33) are subjects of the specificational sentences as in (34).

(34) a. ***The tallest girl in my class** is Mary.*
　　 b. ***The main actress of that movie** is Ingrid Bergman.*

As subjects of specificational sentences, they are not referential but designate a property (see Section 3.2). As we can see in the tag-questions of (35) below the subjects of the specificational sentences are referred using *it*.

(35) a. ***The tallest girl in my class** is Mary, {isn't it/*isn't she}?*
　　 b. ***The main actress of that movie** is Ingrid Bergman, {isn't it/*isn't she}?*

To explain why examples in (33) but not those in (31) are acceptable, we can

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9) The examples in (33) are grammatical, although it might not be natural.

examine the grammatical role of the head noun in an RC. In (33), the head nouns function as subjects in an RC. In (31), however, they function as a subject complement (or a predicate NP) in an RC, which can be regarded as one of the oblique positions on the AH.

Considering the different grammatical judgements between (30), (31), and (33), we can predict that case-recoverability affects the relativization of an NP designating a property. First, comparing (30) to (31), we can expect that when an NP that designates a property takes an 'oblique role' it is not likely to be relativized, unless it takes the same grammatical role in the RC and the main clause. This is because having the same grammatical role both in an RC and the main clause helps to retrieve the grammatical role of the head noun in the RC, that is, it increases the case-recoverability. Our argument is supported by the fact that in Hebrew, a grammatical position that can be relativized only by the pronoun-retention strategy – in which the head noun appears in the RC as a pronoun – can be relativized by the gap strategy – in which the head noun is deleted from the RC – when the head noun has the same grammatical role both in an RC and a main clause (Comrie 1989: 154-155; J. J. Song 2001: 236). Since the head noun is less explicitly expressed in an RC in the gap strategy than it is in the pronoun-retention strategy, we can predict that when the relativized NP has the same grammatical role both in an RC and a main clause it helps to retrieve its grammatical role in an RC. Second, comparing (31) to (33), one can deduce that when an NP designates a property and takes a 'subject role' in an RC, it is not necessary for the NP to have the same grammatical role in the main clause. As the AH tells us about the relativizability in association with case-recoverability, when an NP designating a property functions as a subject in an RC, it is more accessible to relativization than one that functions as a subject complement in an RC.

When an NP designating a property cannot be the head noun of an RC, however, it cannot be relativized. Korean RCs can provide an example. Unlike RCs in English, an adjective cannot be the head noun of an RC in Korean. Thus, an NP designating a property cannot be relativized. The subject complements in (36), for instance, designate properties. Since they cannot be relativized, the sentences in (37) are unacceptable.

(36) a. *ku-uy*   *tongsayng-un*   ***sinsa-ka***   *ani-ta.*
    he-of   brother-REL   gentleman-NOM   is not-DEC
    'His brother is not a gentleman.'

b. *kunye-nun* **papo**-*ka* *ani-ta*.
   She-TOP   fool-NOM   is not-DEC
   'She is not a fool.'

(37) a. * *John-un*   *ku-uy*   *tongsayng-un*   *ani-n*
        John-TOP   he-of   brother-REL   is not-REL
        sinsa-*i-ta*.
        gentleman-be-DEC
        'John is a gentleman, which his brother is not.'

   b. * *John-un*   *Mary-lul*   *kunye-ka*   *ani-n*   **papo**-*lo*
        John-TOP   Mary-ACC   she-NOM   is not-REL   fool-as
        yeki-nta.
        regard-DEC
        'John regards Mary as a fool, which she is not.'

Because Korean does not allow an NP designating a property to be relativized, an NP without reference value may not be relativized in Korean.

Although it must be further investigated with in-depth analysis of cross-linguistic data, whether a language allows a property to be a head noun of an RC construction seems to be related to the position of the head noun vis-á-vis an RC. To be more specific, there is a possibility that we may find a meaningful relation between using postnominal RCs and allowing a property to be a head noun. This assumption is based on the observation made regarding Korean data. As we have shown above, Korean does not allow an NP designating a property to be relativized. However, a property can be a head noun of an RC construction when a head noun comes before an RC. In Korean, there is a polysemous construction that can function both as an adverbial clause and an RC as in Warlpiri. Clauses that are marked by *-nuntey* (the *-nuntey* clause) are those in focus. As described in J-E Lee (2017b), the *-nuntey* clause can represent the meaning of an RC whose head noun refers to the previous clause. In (38), for instance, *ikes* 'this' in the second clause refers to what is described in the first clause.

(38) *kuliko-nun*   *eli-n*   *wangca-ka*   *kkalulu*
     and-TOP   little-REL   prince-NOM   laughing sound
     wusetay-ess-nuntey   *ikes-i*   *na-lul*   *mopsi*   *enccanh-key ha-ess-ta*.
     laugh-PST-and   this-NOM   I-ACC   very   irritated-CAIS-PST-DEC

'And the little prince broke into a lovely peal of laughter, which irritated me very much.' (J-E Lee 2017: 878)

This cannot be expressed by a canonical Korean RC in which a head noun comes after the RC. Likewise, the meaning of an RC whose head noun refers to a property as in (39) can be expressed by the *-nuntey* clause as in (40).

(39) a. *John is **a gentleman**, which his brother is not.*
    b. *John is **a gentleman**, which his brother is too.*

(40) a. *John-un*   **sinsa***-i-ntey*   *tongsayng-un*   *ani-ta*
        John-TOP   gentleman-be-but   brother-TOP   is not-DEC
        'John is a gentleman, which his brother is not.'
    b. *John-un*   **sinsa***-i-ntey*   *tongsayng-to*   *kuleh-ta*
        John-TOP   gentleman-be-but   brother-TOP   is so-DEC
        'John is a gentleman, which his brother is too.'

In the following section, we will show how the concept of reference value adds to our understanding of unrelativizable NPs in Korean that cannot be explained by case-recoverability.

4. Re-examining Unrelativizable NPs in Korean

As it has been pointed out in Section 2, the ungrammaticality of the RC in (41a) cannot be explained by case-recoverability.

(41) a. * *Mary-ka*   *cwuk-n*   **kwaro**
        Mary-NOM   die-REL   overwork
        'overwork, because of which Mary died'
    b. *Mary-ka*   **kwaro***-lo*   *cwuk-ess-ta.*
        Mary-NOM   overwork-because of   die-PST-DEC
        'Mary died because of overwork.'

This is because, in light of the lexical meaning of the head noun, *kwaro* 'overwork', one can easily recognize that the head noun takes an oblique role in the RC and

stands for the cause of Mary's death. Thus, case-recoverability is not enough to describe the unrelativizability of an NP.

With reference value, we can explain the unrelativizability of the oblique NP *kwaro-lo* 'by overwork' in (41b). It cannot be relativized because it does not have reference value. In Section 3.2, we have shown that a demonstrative is not compatible with an oblique NP without reference value. Since the NP *kwaro-lo* does not have reference value, (42) below is not acceptable.[10],[11]

(42) * *Mary-ka*   *ku*   **kwaro**-*lo*   *cwuk-ess-ta.*
     Mary-NOM   that   overwork-because of   die-PST-DEC
     '*Mary died because of that overwork.'

It should be emphasized, however, that reference value is not a feature of an NP in itself. Rather, the reference value of an NP depends on the sentence in which it appears as a whole. In (43b), for instance, the subject NP *kwaro* 'overwork', has reference value; it designates the abstract entity of an agent and can be relativized as in (43a).

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10) When *kwaro* 'overwork' in (42) is replaced with *pyeng* 'disease' as in [2b] below, it can be modified by the demonstrative *ku* and can be relativized as in [2a].

   [2] a. *Mary-ka*   *cwuk-un*   *ku pyeng*
        Mary-NOM die-REL   the disease
        'that disease from which Mary died'
      b. *Mary-ka*   *ku*   *pyeng-ulo*   *cwuk-ess-ta.*
        Mary-NOM the   disease-of   die-PST-DEC
        'Mary died from that disease.'

   The different grammatical judgements between (42) and [2b] are attributed to the fact that unlike *kwaro* 'overwork' in (42), *pyeng* 'disease' in [2b] refers to a specific type, which renders a status to the NP that allows it to be modified by a demonstrative (also see Section 3.2).

11) In the same vein, reference value can provide an explanation for the ungrammaticality of the RC in (13). The head noun *palam* 'wind' does not have reference value in (13a) (repeated in [3] below), as [3] is not acceptable.

   [3] a. **namwu-ka*   *ssuleci-n*   *palam*
        Tree-NOM   fall-REL   wind
        'wind by which trees fell' (M-G Kim 2010: 154)
      b. *namwu-ka*   *palam-ey*   *ssuleci-ess-ta.*
        Tree-NOM   wind-by   fall-PST-DEC
        'Tree fell by wind.' (M-G Kim 2010: 154)
   [4] **namwu-ka*   *ku*   *palam-ey*   *ssuleci-ess-ta.*
       Tree-NOM   the   wind-by   fall-PST-DEC
       'Trees fell by that wind.'

   The oblique NP in [4] is not compatible with a demonstrative, which indicates that it does not have reference value in that sentence.

(43) a. *Mary-lul* *cwuki-n* *kwaro*
   Mary-ACC kill-REL overwork
   'overwork that killed Mary'

 b. *kwaro-ka* *Mary-lul* *cwuki-ess-ta.*
   overwork-NOM Mary-ACC kill-PST-DEC
   'Overwork killed Mary.'

With reference value, we can also explain why the RC in (44a) is grammatical but not the one in (45a).

(44) a. *John-ul* *ttayli-n* *pancang*
   John-ACC hit-REL class president
   'the class president, who hit John'

 b. *pancang-i*   *John-ul* *ttayli-ess-ta.*
   class president-NOM   John-ACC hit-PST-DEC
   'The class president hit John.'

(45) a. * *Mary-ka* *John-ul* *ppop-un* *pancang*
   Mary-NOM John-ACC choose-REL class president
   '*a class president that Mary chose John for'

 b. *Mary-ka* *John-ul* ***pancang-ulo*** *ppop-ass-ta.*
   Mary-NOM John-ACC class president-as choose-PST-DEC
   'Mary chose John for a class president.'

In (44b), *pancang* 'class president' takes a subject role and can be relativized as in (44a). In (45b), the same noun takes an oblique role and cannot be relativized as the RC in (45a) is ungrammatical. Apart from the different grammatical roles of the head noun in the RCs, (44a) and (45a) are different in terms of reference value. *Pancang* 'class president' in (44a) has reference value; it designates the entity of an agent. This is supported by the fact that *pancang* 'class president' cannot be an answer to the question *mweka* 'what' but *nwuka* 'who' in (46).

(46) A: {* *mweka/nwuka*} *John-ul* *ttayli-ess-nay?*
    what/who John-ACC hit-PST-DEC
   '{*What/who} hit John?'

B: *pancang-i*   *John-ul*   *ttayli-ess-ta.*
　class president-NOM　　John-ACC　　hit-PST-DEC
　'The class president hit John.'

Pancang 'class president' in (45a), however, does not have reference value. It does not designate any entity, but the property of being a class president. This is supported by the fact that *pancang* can be an answer to the question *mwel* 'what' in (47).

(47) A: *Mary-ka*   *John-ul*   {*mwel/*nwukwu*}-lo*   *ppop-ass-nya?*
　　　　Mary-NOM　　John-ACC　　what/who-as　　　elect-PST-DEC
　　　　'{What/*who} did Mary elect John for?'
　　B: *Mary-ka*   *John-ul*   **pancang-ulo**   *ppop-ass-ta.*
　　　　Mary-NOM　　John-ACC　　class president-as　　choose-PST-DEC
　　　　'Mary chose John for a class president.'

In addition, reference value can explain why there is an example in which a subject NP cannot be relativized in Korean. Let us examine the examples below.[12]

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12) One anonymous reviewer raised up an important question about the main argument of this paper with the examples below.

[5] a. *wuli*   *pan-eyse*   *ceyil*   *khi-ka*   *khu-n*   *yehaksayng*
　　　our   class-among   the most   height-NOM   tall-REL   female student
　　　'the tallest female student in my class'
　　b. ??*yehaksayng-i* *wuli*   *pan-eyse*   *ceyil*   *khi-ka*   *khu-ta.*
　　　female student   our   class-among   the most   height-NOM   tall-DEC
　　　'*Female student is the tallest in our class.'

S/he points out that unlike [5a], [5b] sounds rather awkward unless a definite/specific reading is forced on *yehaksayng* 'female student.' S/he further illustrates that the contrast seems to show that the RC in [5a] helps determine the reference of the head noun, which is the usual assumption about restrictive RCs. Based on this assumption, s/he raised up a question about why the reference value of the head noun itself should be relevant for relativization to begin with. In other words, *yehaksayng* 'female student' in [5b] can be relativized, although it does not have reference value. *Yehaksayng* 'female student' attains reference value once an RC is attached to it as in [3a]. Thus, s/he suggested that whether or not an NP has a reference value may not a factor affecting its relativizability.
However, this observation should be examined further. To argue that an RC helps to determine the reference of the head noun is different from claiming an RC gives reference value to a head noun. The latter is incorrect. The head noun with a modifier may or may not have reference value. This is because reference value is not a fixed feature of an NP. Instead, the reference value of an NP is dependent on the sentence where it is used (See Section 4). Likewise, the reference value of *yehaksayng* 'female student' in [5a] is not set yet. As we described in Section 4, it may (as in (48b)) or may not (as in (49b)) have reference value in a sentence. What I am trying to show here is that we cannot say that an NP without

(48) a. *ecey*   *cenhak-ul ka-n*   *wuli*   *pan-eyse*

     yesterday   transfer a school-REL   our   class-among

     ceil   *khi-ka*   *khu-n*   *yehaksayng*

     the most   height-NOM   tall-REL   female student

     'the tallest female student in my class, who transferred to another school yesterday'

   b. *ecey*   *wuli*   *pan-eyse*   *ceyil*   *khi-ka*

     yesterday   our   class-among   the most   height-NOM

     khu-n   *yehaksayng-i*   *cenhak ul ka-ass-ta.*

     tall-REL   female student-NOM   transfer a school-PST-DEC

     'The tallest female student in my class transferred to another school yesterday.'

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reference value comes to have reference value, when it is relativized. Its reference value is decided based on the sentence in which it appears. When it does not have a reference value, its relativizability is restricted in varying degree according to the language (See Section 3.3). With this in mind, three reasons can be provided to prove that the RC in [5a] is not formed from [5b] but from [6] where *yehaksayng* 'female student' has reference value.

[6] *ku*   *yehaksayng-i*   *wuli*   *pan-eyse*   *ceyil*   *khi-ka*   *khu-ta.*
     that   female student   our   class-among   the most   height-NOM   tall-DEC
     'The female student is the tallest in our class.'

First, as explained above, the reference value of *yehaksayng* 'female student' in [5a] is not set yet. So, [5a] does not have to come from [5b]. Second, the grammaticality/acceptability of an RC is affected by the grammaticality of its non-RC correspondent. The grammaticality/acceptability of [5a] does not accord with [5b], but with [6]. As shown above, we cannot say that unlike [5b], [5a] is grammatical because the RC gives reference value to the head noun in [5a]. Again, the reference value of the NP in [5a] is not set yet. Third, the fact that *ku* 'the' does not appear in [5a] cannot refute that [5a] is from [6]. Our argument can be supported by the examples below.

[7] *nay-ka*   *kacang*   *cohaha-nun*   *kkoch-un*   *cangmi-i-ta.*
     I-NOM   the most   like-TOP   flower-TOP   rose-be-DEC
     'My favorite flower is a rose.'

[8] a. *na-nun*   *ku*   *kkoch-ul*   *kacang*   *cohaha-nta.*
     I-TOP   the   flower-ACC   the most   like-DEC
     'I like that flower the most.'

   b. *na-nun*   *kkoch-ul*   *kacang*   *cohaha-nta.*
     I-TOP   flower-ACC   the most   like-DEC
     'I like flowers the most.'

In terms of the semantics, the RC in [7] should be formed from [8a] not [8b], although there is a discord between [7] and [8a] regarding the presence of *ku* 'the'. Further research is needed, however, to explain thoroughly why *ku* is not required in [7] as in [8a].

In sum, considering that [5a] is not formed from [5b] but from [6], we can hold the argument that reference value should be regarded as a relevant factor for relativization.

(49) a. * *Mary-i-n*   *wuli pan-eyse*   *ceyil*   *khi-ka*
       Mary-be-REL our class-among the most   height-NOM

       khu-n   *yehaksayng*
       tall-REL   female student

       'the tallest female student in my class, who is Mary'

  b. **wuli**   **pan-eyse**   **ceil**   **khi-ka**   **khu-n**
     our   class-among the most   height-NOM   tall-REL

     yehaksayng-i   *Mary-i-ta.*
     female student-NOM Mary-be-DEC

     'The tallest female student in my class is Mary.'

Both head nouns in (48a) and (49a) function as subjects in the RCs as can be seen in (48b) and (49b), but only the RC in (48a) is acceptable. We can explain the difference in acceptability between (48a) and (49a) based on whether or not the head noun has reference value in an RC. In (48b), the subject NP *wuli pan-eyse ceil khi-ka khu-n yehaksayng* 'the tallest female student in our class' has reference value; it picks out an individual entity. When the subject NP in (48b) is left-located as given in (50), *kunye* 'she' but not *kuke* 'it' can refer to the NP reflecting the gender of the subject NP in (48b).

(50) *wuli*   *pan-eyse*   *ceil*   *khi-ka*   *khu-n*
     our   class-at   most   height-NOM   tall-REL

    yehaksayng-ey tayhay malhacamyen,   *{kunye-nun/*kuke-n}*
    female student-as for   she-TOP/it-TOP

    ttokttokha-ko   *wuntong-ul*   *calha-nta*
    smart-and   sport-ACC   be good at-DEC

    'As for the tallest female student in our class, she is smart and good at sports.'

In (49b), however, the subject NP does not have reference value, it does not refer to any particular person but represents a category or property of being the tallest female student. When the subject NP in (49b) is left-located as in (51), *kuke* 'it' can refer to the NP regardless of the gender of the subject NP in (49b).[13]

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13) Unlike in (50), there is no sharp contrast between *kunye-nun* 'she-TOP' and *kuke-n* 'it-TOP' in (51), as one anonymous reviewer pointed out. Further research needs to follow up to give a proper explanation for this.

(51) *wuli*   *pan-eyse*   *ceil*   *khi-ka*   *khu-n*
　　 our   class-at   most   height-NOM   tall-REL
　　 yehaksayng-ey tayhay malhacamyen,   {?*kunye-nun/kuke-n*}
　　 female student-as for   she-TOP/it-TOP
　　 Mary-i-ta.
　　 Mary-be-DEC
　　 'As for the tallest female student in our class, it is Mary.'

Without reference value, the subject NP in (49b) cannot be relativized, and the RC in (49a) turns out to be unacceptable.

Last but not least, reference value provides a better explanation of the relativization of an adjunct of time, place, and instrument. As we have shown in Section 2, M-G Kim (2010) argues that an adjunct is unrelativizable except for cases where it stands for a time, a place, or an instrumental. To explain the reason that an adjunct of time, place, and instrument can be relativized, he relies on pragmatic knowledge. He argues that temporals and locations are more retrievable than other adjuncts because every action has a time or a place as its background. However, he does not provide any explanation on why an NP represents an instrumental is more pragmatic knowledge-sensitive than other adjuncts.

Instead of rushing to pragmatic knowledge right away, however, we can examine reference value of an adjunct of time, place, and instrument. A revised version of the explanation of the relativizability of an adjunct of time, place, and instrument could go like this: an adjunct of time, place, and instrument can be relativized in Korean because i) it has reference value in a sentence, and ii) its grammatical role can be retrieved by pragmatic knowledge. To put it differently, the benefit of pragmatic knowledge in helping to retrieve the grammatical role of the head noun comes after the pre-requisite of relativization, which is having reference value (see Section 3.3). An adjunct of direction, for instance, cannot be relativized in Korean, not because it is less sensitive to pragmatic knowledge than an adjunct of instrument, but because it does not have reference value to begin with.

As we have shown in the previous section, in Korean an adjective cannot be the head noun of an RC. Thus, an NP designating a property cannot be relativized. Because an NP without reference value can be relativized only when a property can be the head noun of a non-restrictive RC in a language, we can conclude that in Korean an NP without reference value cannot be relativized regardless of the case-recoverability. Therefore, reference value is a prerequisite for relativization in

Korean. When an NP has reference value it may or may not be relativized; when an NP does not have reference value, it cannot be relativized at all.

5. Conclusion

While acknowledging that case-recoverability is important, this essay has explored whether the referential feature of an NP affects its relativizability. To explain why an NP whose grammatical role in the RC can be recovered is still unable to be relativized in Korean, the concept of reference value was proposed. Reference value is a feature of an NP that has a corresponding index in the reference tier described in Jackendoff (2002). Two cases were highlighted where an NP does not have reference value: i) when it designates a property or ii) when it is semantically empty. After suggesting that selection of a *wh*-question, selection of a tag-question, and compatibility with a demonstrative can serve as tests for reference value, we examined how reference value affects relativizability along with case-recoverability. The findings showed that when an NP designates a property, it can be relativized only when a property can be the head noun of an RC in that language. However, when an NP is semantically empty, it cannot be relativized at all. With the concept of reference value, we have thus re-examined Korean RCs that are unacceptable regardless of case-recoverability and have concluded that reference value is a pre-requisite for relativization in Korean.

Abbreviations

ACC	accusative
COMP	complementizer
DEC	declarative
DO	direct object
GEN	genitive
INCH	inchoative
NOM	nominative
PRS	present
PST	past
REL	relativizer
TOP	topic

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