

Original Paper

Quantifiers, Binding, and Agreement

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Abstract

The main goal of this paper is to argue that Korean pronouns must be phi-feature-compatible with their antecedents, whereas Korean reflexives are not. It is worth pointing out that Korean pronouns are sensitive to the number feature, whereas Korean anaphors are not. A major point to note is that every-type QPs have a Q feature that is plural in its number, whereas which-type QPs have an optional Q-feature that is singular or plural in number. A further point to note is that Korean pronouns are sensitive to phi-features, which is in accordance with Safir's (2014) hypothesis that "D-bound anaphora must be feature-compatible with its antecedent". With respect to Korean pronouns, it is worth noting that Safir's hypothesis does not work for Korean pronouns since they induce a bound variable reading through the phi-feature agreement. Finally, it is significant to note that Korean anaphors are not feature-compatible with antecedents and that they yield a bound variable reading regardless of their phi-features.

Keywords

binding, quantifier, agreement, bound variable, phi-features

1. Introduction

The main goal of this paper is to argue that the Korean pronouns *ku* 'he' and *ku-tul* 'they' must be phi-feature-compatible with their antecedents, but Korean reflexives are not. According to Safir (2014), "D-bound anaphora must be feature-compatible with its antecedent" (Safir, 2014, p. 92) and "D-bound anaphora is interpreted as a bound variable regardless of its phi-features" (Safir, 2014, p. 92). We argue that Korean pronouns are sensitive to the number feature, but Korean anaphors are not. We further argue that Korean pronouns can induce a bound variable reading, which is subject to the phi-feature agreement. On the other hand, we maintain that Korean anaphors yield a bound variable reading regardless of their phi-features. The organization of this paper is as follows. In section 3, we maintain that every-type QPs have a Q feature that is plural in its number. We contend, on the other hand, that

which-type QPs have an optional Q-feature that is singular or plural in number. In section 4, we show that our agreement-based approach predicts why the Korean singular pronoun *ku* ‘he’ and the Japanese singular pronoun *kare* ‘he’ cannot induce a bound variable reading, along with *every*-type QPs. With respect to Korean pronouns, it is noteworthy that Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014, p. 92) is on the right track since Korean pronouns are sensitive to phi-features. Additionally, it is significant to note that Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92) does not work for Korean pronouns. Korean pronouns can induce a bound variable reading, which is subject to the phi-feature agreement between QPs and them. In section 4, we try to argue that Korean anaphors are not feature-compatible with antecedents. We further argue that Korean anaphors give rise to a bound variable reading regardless of their phi-features. In section 5, we maintain that *caki-casin* ‘self-self’ competes with *caki* ‘self’ only when *caki* ‘self’ acts as a bound variable. When its antecedent is an *every*-type QP, local *caki* ‘self’ may not induce a bound variable reading.

2. Methodology

In this paper, we assume, along with Huang and Tang (1991), Richards (1995, 1997), Chomsky (2000, 2001), Safir (2014), and Sundaresan (2017) that anaphora carries phi-features involving gender, person and number. Anaphors and pronouns have phi-features involving gender, person, and number, but they lack R-feature (referential feature). Thus, in order for anaphora to meet a full interpretation, it has to share phi-features with their antecedents. In this paper, we try to show that the so-called agreement-based mechanism has advantages over Condition A and Condition B, thus eliminating Condition A and Condition B in the Binding Theory. Finally, we aim to examine Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with their antecedents” (Safir, 2014, p. 92). According to Safir (2014), “all bound anaphora is achieved by a single, universally available, D-bound anaphora” (Safir, 2014, p. 92):

(1) Properties of D-bound anaphora

- a. “Always feature-compatible: D-bound anaphora must be feature-compatible with its antecedent (informally, this property may be termed antecedent agreement.”
- b. “Always a variable: D-bound anaphora is interpreted as a bound variable regardless of its phi-features”.

(Safir, 2014, p. 92)

In this paper, we will examine whether or not Safir’s (2014) hypotheses work for Korean binding.

3. Quantifiers

3.1 Q Feature of Every-type QPs

In this section, we wish to argue that *every*-type QPs have a Q feature that is plural in its number. Let us consider the following sentences:

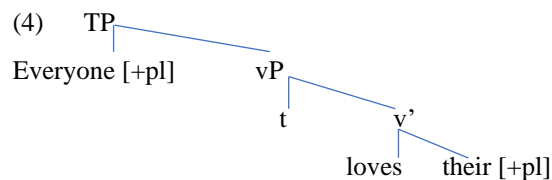
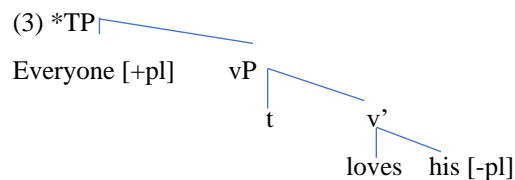
- (2) a. ??/*Nwukwuna_i ku_i-uy pwumonim-ul salanghanta.

Everyone he-GEN parents-ACC love
(Everyone loves his parents.)

- b. Nwukwuna_i ku-tul_i-uy pwumonim-ul salanghanta.

everyone they-GEN parents-ACC love
(Everyone loves his parents.)

The reason why we assume that *every*-type QP has a Q feature that is plural in its number is that (2a) is ungrammatical, but (2b) is grammatical. The singular pronoun *ku* ‘he’ is not interpreted as a bound variable, whereas *ku-tul* ‘they’ is construed as a bound variable. We attribute the fact that *ku* ‘he’ is not construed as a bound variable to the number disagreement between the *every*-type QP and the pronoun *ku* ‘he’. Then (2a) and (2b) will have the following trees, respectively:



As indicated in (3), when the quantifier *nwukwuna* ‘everyone’ is associated with *ku* ‘he’, the pronoun *ku* ‘he’ is not interpreted as a bound variable. We attribute the ungrammaticality of (3) to the fact that the quantifier *nwukwuna* ‘everyone’ is plural in number, but *ku* ‘he’ is singular. Simply put, (3) is ungrammatical due to the number feature disagreement between the QP and the dependent term *ku* ‘he’. On the other hand, as illustrated in (4), when *ku-tul* ‘they’ is linked to the quantifier *nwukwuna* ‘everyone’, it induces a bound variable reading, which is possible because both QP and *ku-tul* ‘they’ are plural in number. That is to say, (4) is grammatical due to the number feature agreement between the QP and *ku-tul* ‘they’. This in turn indicates that *every*-type QPs have a Q feature that is plural in number. The following sentences also lend their support to the claim that *every*-type QPs have a Q feature that is plural in number:

- (5) *Motuni_i-ka moim-ey kassko Tom-i

everyone-NOM meeting-at go-PAST NOM
kekise ku_i-lul mannassta.
there he-ACC met
(Everyone went to the meeting and Tom met him there.)

- (6) Motuni_i-ka moim-ey kassko Tom-i kekise

everyone-NOM meeting-at go-PAST NOM there
ku-tul_i-ul mannassta.

they-ACC met

(Everyone went to the meeting and Tom met them there.)

It is important to note that the so-called E-type pronoun is not c-commanded by quantifiers. As illustrated in (5), the singular pronoun *ku* ‘he’ that is used as the E-type pronoun cannot be associated with the quantifier *motuni* ‘everyone’. On the other hand, the plural pronoun *ku-tul* ‘they’ that is used as the E-type pronoun can be linked to the quantifier *motuni* ‘everyone’. This is possible since *every*-type QPs have a Q-feature that is plural in number. In (5), the E-type pronoun *ku* ‘he’ cannot refer to the QP because of the number feature disagreement between the QP and *ku* ‘he’. More specifically, (5) is ungrammatical since the quantifier *motuni* ‘everyone’ is plural, but *ku* ‘he’ is singular, which results in the number feature disagreement in (5). In (6), on the other hand, the E-type pronoun *ku-tul* ‘they’ can refer to the quantifier *motuni* ‘everyone’ due to the number feature agreement between *motuni* ‘everyone’ which is plural in number and *ku-tul* ‘they’ which is plural in number. This is predictable, given the hypothesis that *every*-type QPs have a Q feature that is plural in number.

Sentences like (7) and (8) also lend their support to the claim that *every*-type QPs have a Q-feature that is plural in number:

(7) **Motuni-ka ku-uy cip-ul ciessta.*

everyone he-GEN house build-PAST

(Everyone built his house.)

(8) *Motuni-ka ku-tul-uy cip-ul ciessta.*

everyone they-GEN house build-PAST

(Everyone built his house.)

Again, the ungrammaticality of (7) and the grammaticality of (8) are predictable, given the assumption that *every*-type QPs have a Q feature that is plural in number. In (7), *ku* ‘he’ does not induce a bound variable reading due to the number feature disagreement between *motuni* ‘everyone’ and *ku* ‘he’. On the other hand, in (8), *ku-tul* ‘they’ are construed as a bound variable because of the number feature agreement between *motuni* ‘everyone’ and *ku-tul* ‘they’. Again, this in turn implies that *every*-type QPs have a Q feature that is plural in number.

Now we wish to point out that the number feature agreement between Korean anaphors and their antecedents is not obligatory. As pointed out by Kang (2013), Korean anaphors exhibit the following property:

(9) “The Korean reflexives *caki* ‘self’ and *caki-casin* ‘self-self’ are structurally or semantically singular NPs whose referent consists of a single entity or more than a single entity”. (Kang, 2013, p. 121)

Let us observe the following examples:

(10) a. *Etten hoysa-ka caki/caki-casin-uy hoysa-lul*

which company self/self-self-GEN company-ACC

pinanhayssnunka?

criticized

(Which company criticized caki/caki-casin's company.)

- b. Tom kwa Bill-i caki/caki-casin-uy emeni-lul
and NOM self/self-self-GEN mother
onghohayssta.
defended

(Tom and Bill defended caki/caki-casin's mother.)

As exemplified in (10a), the singular anaphors *caki* 'self' and *caki-casin* 'self-self' induce a bound variable reading because *caki* 'self' and *caki-casin* 'self-self' agree in number with the *which*-type QP. As alluded to in (10b), however, the number agreement between Korean anaphors and antecedents need not be obligatory. In (10b), the Korean reflexives *caki* 'self' and *caki-casin* 'self-self' can be associated with plural antecedents such as *Tom* and *Bill*. We thus conclude that Korean pronouns must be phi-feature-compatible with their antecedents, but Korean reflexives are not.

3.2 Q Feature which is Optional

In this section, we wish to argue that *which*-type QPs have an optional Q-feature that is singular or plural in number. Both singular terms and plural terms are a condition of a bound variable induced by *which*-type quantifiers. Let us consider the following examples:

- (11) a. Which way is the post office, please?
b. Which houses are most likely to need a humidifier?

As alluded to in (11a), the *which*-type QP can take a singular NP as its head. On the other hand, as illustrated in (11b), the *which*-type QP can take a plural NP as its head. This suggests that *which*-type QPs carry an optional Q-feature that is singular or plural in number. The same applies to Korean:

- (12) a. Etten hoysa_i-ka ku_i-uy hoysa-lul onghohayssni?
which company he-GEN company defended-COMP
(Which company defended his company?)
b. Etten hoysa-tul_i-i ku-tul_i-uy hoysa-lul
which companies-NOM they-GEN company
onghohayssni?
defended-COMP
(Which companies defended their company?)

(12a) and (12b) are grammatical if the singular pronominal *ku* 'he' and the plural pronominal *ku-tul* 'they' are construed as bound by *which*-type QPs. These sentences in turn indicate that *which*-type QPs are singular or plural in number. Thus, the singular pronominal *ku* 'he' and the plural pronominal *ku-tul* 'they' can be associated with the *which*-type QP, which results in a bound variable reading of *ku* 'he' and *ku-tul* 'they'. Likewise, the following sentences lend their support to the claim that *which*-type QPs have an optional Q-feature that is singular or plural:

- (13) a. Etten hoysa_i-ka caki-casin_i-uy hoysa-lul
which company self-self-GEN company

onghohayssni?

defended

(Which company defended self-self's company?)

b. Etten hoysa_i-ka kaki-casin-tul_i-uy hoysa-lul

which company self-self-pl-GEN company

onghohayssni?

defended

(Which company defended self-self-pl's company?)

As illustrated in (13a), the singular reflexive *caki-casin* 'self-self' can be bound to the *which*-type QP, which leads to a bound variable reading of *caki-casin* 'self-self'. As indicated in (13b), on the other hand, the plural reflexive *caki-casin-tul* 'self-self-pl' can be associated with the *which*-type QP, which results in a bound variable reading of *caki-casin-tul* 'self-self-pl'. This in turn implies that *which*-type QPs have an optional Q feature that is singular or plural in number. We thus conclude that unlike *every*-type QPs, *which*-type QPs take singular dependent terms or plural dependent terms as a condition of bound variable anaphora and that a bound variable reading of singular dependent terms and plural dependent terms is available due to the fact that *which*-type QPs have an optional Q feature which is singular or plural in number.

4. Pronouns and Anaphors

4.1 Pronouns that are Feature-compatible with their Antecedents

As observed earlier, *which*-type QPs have an optional Q-feature that is singular or plural in number. We wish to show that Korean pronouns must be phi-feature-compatible with their antecedents. Let us observe the following sentences:

(14) Ku_i-uy emeni-eykey etten salam_i-i

he-GEN mother-DAT which person-NOM

senmwul-ul ponayssnunya?

present-ACC send-PAST

(Which person sent a present to his mother?)

(15) Ku-tul_i-uy emeni-eykey etten salam-tul_i-i

they-GEN mother-DAT which persons-NOM

senmwul-ul ponayssnunya?

present-ACC send-PAST

(Which persons sent a present to their mother?)

The reason why (14) is grammatical is that the Korean pronoun *ku* 'he' is feature-compatible with the *which*-type QP. That is to say, the antecedent *etten salam* 'which person' has phi-features such as gender (masculine or female), person (third person), and number (singular), and the pronoun *ku* 'he' carries phi-features such as gender (masculine), person (third person), and number (singular). Thus, the

Korean pronoun *ku* ‘he’ agrees in phi-features with the *which*-type QP, which leads to the grammaticality of (14). On the other hand, the reason why (15) is grammatical is that the plural pronoun *ku-tul* ‘they’ are feature-compatible with the *which*-type QP. More specifically, the antecedent *etten salam-tul* ‘which persons’ has phi-features such as gender (masculine or female), person (third person), and number (plural) and the plural pronoun *ku-tul* ‘they’ carries phi-features such as gender (masculine or female), person (third person), and number (plural). Thus, the Korean plural pronoun *ku-tul* ‘they’ agrees in phi-features with the *which*-type QP, which results in the grammaticality of (15). This in turn suggests that *which*-type QPs carry an optional Q-feature that is singular or plural in number. *Ku* ‘he’ or *ku-tul* ‘they’ agrees phi-features with a single entity or plural entities induced by *which*-type QPs.

Now let us observe the following sentences:

- (16) *Nwukwuna_i caki-uy namtongsayng-i ku_i-lul
 everyone self-GEN brother-NOM he-ACC
 miwehanta-ko syngkakhanta.
 hate-COMP think
 (Everyone thinks that his brother hates him.)

- (17) Nwukwuna_i caki-uy namtongsayng-i ku-tul_i-ul
 everyone self-GEN brother-NOM they-ACC
 miwehantako syngkakhanta.
 hate-COMP think
 (Everyone thinks that his brother hates him.)

As observed earlier, *every*-type QPs have a Q feature that is plural in number. The reason why (16) is ungrammatical is that the Korean pronoun *ku* ‘he’ does not agree in the number feature with its antecedent. More specifically, the *every*-type QP has phi-features such as person (third person), number (plural), and gender (masculine or female) and the pronoun *ku* ‘he’ carries phi-features such as person (third person), number (singular), and gender (masculine). Thus, the ungrammaticality of (16) is attributed to the number disagreement between the *every*-type QP and the pronoun *ku* ‘he’. This in turn indicates that Korean pronouns are sensitive to a number feature. On the other hand, the reason why (17) is grammatical is that the pronoun *ku-tul* ‘they’ agrees in phi-features with the *every*-type QP. That is to say, the *every*-type QP has phi-features such as gender (masculine or female), person (third person), and number (plural) and the pronoun *ku-tul* ‘they’ carries phi-features such as gender (masculine or female), person (third person), and number (plural). We take this as indicating that *ku-tul* ‘they’ agrees in phi-features with the *every*-type QP, hence the grammaticality of (17).

A number of approaches to the Binding Theory have made crucial reference to pronouns. An interesting property is exhibited by the Korean singular pronoun *ku* ‘he’ and the Japanese singular pronoun *kare* ‘he’. It is a well-known fact that unlike the English pronoun *he*, the Japanese singular pronoun *kare* ‘he’ cannot be interpreted as a bound variable (Hoji, 1991, 1995, 1997), Aoun and

Hornstein (1986, 1991), Higginbotham (1992) among others). Thus, the following sentence with the intending reading is ungrammatical, as indicated in (18):

- (18) *Daremo_i-ga kare_i-ga tukut-ta omotya-o
 everyone-NOM he-NOM make-PAST toy-ACC
 kowasi-ta.
 break-PAST
 (Everyone_i broke the toy that he_i had made.)
 (Hoji, 1991, p. 287)

The following quotation clearly shows that the Japanese singular pronoun *kare* ‘he’ cannot induce a bound variable reading:

- (19) a. Kare ‘he’ cannot yield a bound variable reading.
 (Saito & Hoji, 1983, Aikawa, 1989)
 b. Kare ‘he’ must be A’-free.
 (Aoun & Hornstein, 1986)
 c. Kare ‘he’ must be operator free.
 (Katada, 1991)

The above statements are the same though differing in explanatory flavor. However, these statements cannot account for why *kare* ‘he’ cannot be a bound variable. We wish to argue that the reason why (18) is ungrammatical is that *daremo* ‘everyone’ is plural in its number and *kare* ‘he’ is singular. That is to say, the Japanese singular pronoun *kare* ‘he’ does not agree in number with the QP, which results in the ungrammaticality of (18). The following sentences lend their support to our claim:

- (20) *Daremo_i-ga Mary-ga kare_i-o butta to itta.
 everyone-NOM NOM he-ACC hit said
 (Everyone said that Mary hit him.)
 (21) Daremo_i-ga Mary-ga karera_i-o butta to itta.
 everyone-NOM NOM they-ACC hit said
 (Everyone said that Mary hit him.)

Aikawa (1989) points out that the Japanese plural pronoun *karera* ‘they’ can be a bound variable. Our agreement-based approach predicts why (20) is ungrammatical, whereas why (21) is grammatical. We wish to argue that *daremo* ‘everyone’ is plural in its number since it involves a group of people and *kare* ‘he’ is singular in number. That is, the pronoun *kare* ‘he’ does not agree in number with the *every*-type QP, which results in the ungrammaticality of (20). On the other hand, the plural pronoun *karera* ‘they’ in (21) is phi-feature-compatible with the QP, which leads to the grammaticality of (21). Note that *daremo* ‘everyone’ is plural in number since it involves a group of people and *karera* ‘they’ are plural in its number. The following Korean sentences lend their support to our analysis:

- (22) *Nwukwuna_i ku_i-ka mantun kominhyong-ul
 everyone he-NOM make-PAST a toy bear-ACC

salanghanta.

love

(Everyone_i loves the toy bear that he_i had made.)

(23) Nwukwuna_i ku-tul_i-i mantun kominhyong-ul

everyone they-NOM make-PAST a toy bear-ACC

salanghanta.

love

(Everyone_i loves the toy bear that he_i had made.)

In (22), the *every*-type QP carries phi-features involving gender (masculine or female), person (third person) and number (plural) and the pronoun *ku* ‘he’ carries phi-features involving as gender (masculine), person (third person), and number (singular). Thus, *ku* ‘he’ does not agree in number with the *every*-type QP, hence the ungrammaticality of (22). On the other hand, in (23), the *every*-type QP has phi-features involving gender (masculine or female), person (third person), and number (plural) and the plural pronoun *ku-tul* ‘they’ carries phi-features involving gender (masculine or female), person (third person), and number. The plural pronoun *ku-tul* ‘they’ agrees in phi-features with the *every*-type QP, which results in a bound variable reading of (23). As observed, our agreement-based approach predicts why the Korean singular pronoun *ku* ‘he’ and the Japanese singular pronoun *kare* ‘he’ cannot be construed as a bound variable, along with *every*-type QPs.

Now let us turn our attention to Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014, p. 92). To be brief, Safir’s (2014) hypothesis is on the right track since Korean pronouns are sensitive to phi-features. More specifically, whether *ku* ‘he’ and *ku-tul* ‘they’ induce a bound variable reading or not depends on the phi-feature agreement between QPs and them. Hence, they must be feature-compatible with their antecedents.

Now let us turn to Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92). It is significant to note that Korean pronouns can yield a bound variable reading through the phi-feature agreement between QPs and them. Simply put, Safir’s (2014) second hypothesis wrongly predicts that Korean pronouns induces a bound variable reading regardless of their phi-features. We thus conclude that Korean pronouns are sensitive to phi-features and thus they are feature-compatible with their antecedents.

4.2 Anaphors

In what follows, we try to show that Korean anaphors are not feature-compatible with their antecedents. Additionally, we argue that Korean anaphors give rise to a bound variable reading regardless of their phi-features. Let us consider the following sentences:

(24) Caki_i-uy emeni-eykey etten salam_i-i

self-GEN mother-DAT which person-NOM

senmwul-ul onayssnunya?

presant-ACC send-PAST

(Which person sent a present to his mother?)

(25) Caki-casin_i-uy emeni-eykey etten salam_i-i

self-self-GEN mother-DAT which person-NOM

senmwul-ul ponayssnunya?

presant-ACC send-PAST

(Which person sent a present to his mother?)

In (24), the Korean reflexive *caki* ‘self’ is interpreted as a bound variable, along with the *which*-type QP. The fact that the Korean reflexive *caki* ‘self’ can give rise to a bound variable reading is predictable under the agreement-based approach. The antecedent *etten salam* ‘which person’ has phi-features involving gender (masculine or female), person (third person), and number (singular) and the reflexive *caki* ‘self’ has phi-features involving gender (masculine or female), person (second or third person), and number (singular). Simply put, the Korean reflexive *caki* ‘self’ agrees in phi-features with the *which*-type QP, which leads to a bound variable reading of *caki* ‘self’. On the other hand, the Korean reflexive *caki-casin* ‘self-self’ induces a bound variable reading along with the *which*-type QP. In this example, the Korean anaphor *caki-casin* ‘self-self’ carries phi-features involving gender (masculine or female), person (third person), and number (singular), which in turn indicates that *caki-casin* ‘self-self’ agrees in phi-features with the *which*-type QP, hence the grammaticality of (25). This seems to suggest that Korean anaphors must be feature-compatible with their antecedents. However, the following sentences suggest the opposite:

(26) Ku-casin-tul_i-uy emeni-eykey etten salam_i-i

he-self-pl-GEN mother-DAT which person-NOM

senmwul-ul ponayssnunya?

presant-ACC send-PAST

(Which person sent a present to his mother?)

(27) Caki-casin-tul_i-uy emeni-eykey etten salam_i-i

self-self-pl-GEN mother-DAT which person-NOM

senmwul-ul ponayssnunya?

presant-ACC send-PAST

(Which person sent a present to his mother?)

In (26), the Korean plural reflexive may induce a bound variable reading, along with the *which*-type QP. In this example, the antecedent *etten salam* ‘which person’ has phi-features involving gender (masculine or female), person (third person), and number (singular) and the Korean plural reflexive *ku-casin-tul* ‘he-self-pl’ has phi-features involving gender (masculine), person (third person), and number (plural). This indicates that *ku-casin-tul* ‘he-self-pl’ is not feature-compatible with its antecedents. In (26), *ku-casin-tul* ‘he-self-pl’ does not agree in its number feature with the *which*-type QP. Despite this, *ku-casin-tul* ‘he-self-pl’ gives rise to a bound variable reading, which is against Safir’s hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014,

p. 92). Likewise, the Korean plural reflexive *caki-casin-tul* ‘self-self-pl’ induces a bound variable reading, along with the *which*-type QP, despite the fact that *caki-casin-tul* ‘self-self-pl’ does not agree in its number feature with the *which*-type QP. This in turn suggests that our data are against Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014, p. 92). Additionally, it is worth noting that Korean plural anaphors yield a bound variable reading regardless of their phi-features, which is in accordance with Safir’s (2106) hypothesis.

Now let us turn our attention to *every*-type QPs. Let us observe the following sentences:

(28) ???*Nwukwuna_i caki_i-lul onghohayssta.*

everyone self-ACC defended

(Everyone defended self.)

(29) *Nwukwuna_i caki-casin_i-ul onghohayssta.*

everyone self-self-ACC defended

(Everyone defended self.)

In (28), the Korean reflexive *caki* ‘self’ may not yield a bound variable reading. It must be noted that the hearer may be favored over the antecedent as the reference of *caki* ‘self’. In (29), on the other hand, the Korean reflexive *caki-casin* ‘self-self’ refers to the linguistic antecedent. In (28), *caki* ‘self’ does not agree in its number with the *every*-type QP, hence the degraded grammaticality of (28). However, the Korean reflexive *caki-casin* ‘self-self’ yields a bound variable reading, along with the *every*-type QP. Despite this fact, the Korean reflexive *caki-casin* ‘self-self’ does not agree in its number with the *every*-type QP. Note that *nwukwuna* ‘everyone’ is plural in its number since it involves a group of people and *caki-casin* ‘self-self’ is singular in its number. It is noteworthy that this is against Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014, p. 92). It is worth pointing out that our observation supports Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92). As argued earlier, local *caki* ‘self’ may not induce a bound variable reading along with the *every*-type QP, which takes place because of the phi-feature disagreement. On the other hand, *caki-casin* ‘self-self’ can induce a bound variable reading regardless of their phi-features, which is in accordance with Safir’s (2014) spirit.

Now let us observe the following sentences. In (30a) and (30b), the Korean reflexives *caki-casin* ‘self-self’ and *caki* ‘self’ occur non-locally with respect to the *every*-type QP:

(30) a. *Nwukwuna_i Mary-ka caki_i-lul pipphanhayssta-ko*

everyone NOM self-ACC criticize

malhayssta.

said

(Everyone said that Mary criticized caki.)

b. *Nwukwuna_i Mary-ka caki-casin_i-ul pipphanhayssta-ko*

everyone NOM self-self-ACC criticize-COMP

malhayssta.

said

(Everyone said that Mary criticized caki-casin.)

In (30a), *caki* ‘self’ occurs non-locally with respect to the *every*-type QP and this example is perfect with the intended reading. The grammaticality of (30a) indicates that non-local *caki* ‘self’ can give rise to a bound variable reading. In this example, the antecedent *nwukwuna* ‘everyone’ has phi-features involving gender (masculine or female), person (third person), and number (plural) and *caki* ‘self’ has phi-features involving gender (masculine or female), person (third person), and number (singular). This in turn indicates that *caki* ‘self’ induces a bound variable reading, despite the fact that it does not agree in its number with the *every*-type QP. This implies that our observation is against Safir’s (2014) hypothesis which “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2014, p. 92). However, our data support Safir’s (2014) second hypothesis that D-bound anaphora is interpreted as a bound variable regardless of its phi-features. As observed, non-local *caki* ‘self’ induces a bound variable reading regardless of its phi-features. Likewise, in (30b), *caki-casin* ‘self-self’ appears non-locally with respect to the *every*-type QP and this sentence is perfect with the intended reading. The grammaticality of (30b) suggests that *caki-casin* ‘self-self’ induces a bound variable reading. In this example, the antecedent *nwukwuna* ‘everyone’ has phi-features such as gender (masculine or female), person (third person), and number (plural) and *caki-casin* ‘self-self’ carries phi-features such as gender (masculine or female), person (third person), and number (singular). The grammaticality of (30b) indicates that *caki-casin* ‘self-self’ induces a bound variable reading, despite the fact that it does not agree in number with the *every*-type QP. This implies that (30b) is against Safir’s (2014) first hypothesis that D-bound anaphora must be feature-compatible with its antecedent. However, (30b) lends its support to Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92).

5. A True Anaphor

In what follows, we briefly illustrate that the Korean reflexive *caki-casin* ‘self-self’ is a true anaphor. Now let us turn to (31a) and (31b):

(31) a. John_i-i caki_i-lul onghohayssta.

NOM self-ACC defended

(John defended self.)

b. John_i-i caki-casin_i-ul onghohayssta.

NOM self-self-ACC defended

(John defended self-self.)

Both (31a) and (31b) are grammatical with the intended reading. However, observe the following sentences, repeated here:

(32) a. ???Nwukwuna_i caki_i-lul onghohayssta.

everyone self-ACC defended

(Everyone defended self.)

b. Nwukwuna_i caki-casin_i-ul onghohayssta.

everyone self-self-ACC defended

(Everyone defended self.)

In (32a) and (32b), *caki* ‘self’ and *caki-casin* ‘self-self’ occur locally with respect to the *every*-type QP. However, the occurrence of *caki-casin* ‘self-self’ is much more natural. In (32a), we can only see degraded grammaticality for local binding of *caki* ‘self’ as compared to that of *caki-casin* ‘self-self’. We take this as indicating that *caki* ‘self’ competes with *caki-casin* ‘self-self’ only when it acts as a bound variable. When its antecedent is an *every*-type QP, it becomes ungrammatical. That is, *caki-casin* ‘self-self’ competes with *caki* ‘self’ but *caki* ‘self’ loses. Simply put, *caki-casin* ‘self-self’ always induces a bound variable reading regardless of its phi-features. Thus, this fact supports Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92). In (32b), *caki-casin* ‘self-self’ gives rise to a bound variable reading, despite the fact that it does not agree in number with the *every*-type QP.

6. Conclusion

The main goal of this paper is to argue that Korean pronouns must be phi-feature-compatible with their antecedents, whereas Korean reflexives are not. This paper argues that Korean pronouns are sensitive to the number feature, whereas Korean anaphors are not. In section 3, we have shown that *every*-type QPs have a Q feature that is plural in its number, whereas *which*-type QPs have an optional Q-feature that is singular or plural in number. In section 4, we have contended that our agreement-based analysis explains why the Korean singular *ku* ‘he’ and the Japanese singular pronoun *kare* ‘he’ cannot be interpreted as a bound variable. In addition, we have shown that Safir’s (2014) hypothesis that “D-bound anaphora must be feature-compatible with its antecedent” (Safir, 2016, p. 92) is on the right track since Korean pronouns are sensitive to phi-features. Additionally, we have contended that Safir’s (2014) second hypothesis that “D-bound anaphora is interpreted as a bound variable regardless of its phi-features” (Safir, 2014, p. 92) does not work for Korean pronouns since they induce a bound variable reading through the phi-feature agreement. In section 4, we have argued that Korean anaphors are not feature-compatible with antecedents and that Korean anaphors give rise to a bound variable reading regardless of their phi-features. In section 5, we have maintained that *caki-casin* ‘self-self’ competes with *caki* ‘self’ only when it acts as a bound variable. When its antecedent is an *every*-type QP, local *caki* ‘self’ may not induce a bound variable reading. That is, *caki-casin* ‘self-self’ competes with *caki* ‘self’ but *caki* ‘self’ loses.

References

- Aikawa, T. (1989). Behavior of Japanese Anaphoric Expressions in Sloppy Identity: Karera and Zibun. *MIT Working Papers*, 14, 1-16.
- Aoun, J., & Hornstein, N. (1986). *Bound and Referential Pronouns*. ms. University of Southern California and University of Maryland.
- Chomsky, N. (2000). Minimalist Inquires: The Framework. In Roger Martin, David Michaels, & Juan Uriagereka (Eds.), *Step by Step: Essays on Minimalist Syntax In Honor of Howard Lasnik* (pp. 89-156). Cambridge, Mass: MIT Press.
- Chomsky, N. (2001). Derivation by Phase. In M. Kenstowicz (Ed.), *Ken Hale: A Life in Language* (pp. 1-52). Cambridge, Mass: MIT Press.
- Higginbotham, J. (1992). *Anaphoric Reference and Common Reference*. ms. MIT, Cambridge.
- Hoji, H. (1991). Kare in C. Georgopoulos & R. Ishihara (Eds.), *Interdisciplinary Approaches to Language: Essays in Honor of S.-Y. Kuroda* (pp. 284-304).
- Hoji, H., & Saito, M. (1983). Weak Crossover and Move- α in Japanese. *Natural Language and Linguistic Theory*, 1, 245-259. <https://doi.org/10.1007/BF00154832>
- Kang, N-K. (2013). The Reason Why *Ku* 'he' cannot be A'-dependent: An Agree-based Approach. *Studies in English Language & Literature*, 50(1), 1-23.
- Katada, F. (1991). The LF Representation of Anaphors: *Linguistic Inquiry*, 22, 287-313.
- Richads, N. (1997). Composition and Disjoint Reference. *Linguistic Inquiry*, 28, 178-187.
- Richards, N. (1995). *Toward a Theory of Head-binding*. ms. MIT. Cambridge, MA.
- Safir, K. (2014). On True Anaphor. *Linguistic Inquiry*, 45(1), 91-124. https://doi.org/10.1162/LING_a_00149
- Sundaresan, S. (2017). Anaphors are not born equal: Distinct classes of anaphor within a enriched personal system. *MIT Working Papers in Linguistics*, 85, 217-231.