Singularity, Plurality, and Their Acquisition

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The main purpose of this paper is to provide an analysis of the L2 learners' acquisition of variable binding. A point to note is that the L2 learners acquired *every*-type QPs before *no*-type QPs. A further point to note is that English pronouns induce variable binding with singularity, whereas Korean pronouns allow variable binding only with plurality. It is worth pointing out that English and Korean have a commonality with respect to E-type pronouns, which in turn suggests that positive transfer activates the L2 learning. It is worthwhile noting, on the other hand, that plural dependent terms induce variable binding, which is universal in Korean and English. Our research shows, on the other hand, that variable binding of *every*-type QPs was the first acquired by the L2 learners, followed by that of *no*-type QPs, and that of *someone*-type QPs. With respect to singularity and plurality, it is significant to note that as a condition of variable binding, singularity is preferred over plurality by the L2 learners.
Keywords: variable binding, E-type pronouns, every-type QPs, no-type QPs, someone-type QPs

I.   INTRODUCTION

The main purpose of this paper is to demonstrate that variable binding is closely related to singularity and plurality and to show how the L2 learners acquire variable binding. More specifically, our research shows that the L2 learners depend on their L1 to acquire variable binding. It is interesting to note that the notion c-command plays a crucial role in variable binding in English and Korean. With respect to Korean reflexives, it is worth pointing out that like English reflexives, they require both singularity and plurality for variable binding. It is worthwhile noting, on the other hand, that in the case of Korean pronouns, plurality allows variable binding, whereas singularity does not. It is significant to note that in the case of English pronouns, singular and plural dependent terms induce variable binding. Unlike *no*-type quantifiers, *every*-type quantifiers and *someone*-type quantifiers

in English require both singularity and plurality for variable binding. It must be noted, however, that *no*-type quantifiers require only singularity for variable binding. The organization of this paper is as follows. In section 2, we review some conditions of variable binding. In section 4, we argue that the L2 learners acquired *every*-type QPs before *no*-type QPs. We also argue that English pronouns induce variable binding with singularity, whereas Korean pronouns allow variable binding only with plurality. We maintain, on the other hand, that English and Korean have a commonality with respect to E-type pronouns. This in turn suggests that positive transfer activates the L2 learning. We also contend that the fact that plural dependent terms induce variable binding may be universal. We further argue that the L2 learners' acquisition difficulty with respect to *someone*-type QPs comes from negative transfer. In section 5, we contend that variable binding of *every*-type QPs was the first acquired by the L2 learners, followed by that of *no*-type QPs, and that of *someone*-type QPs. We also argue that the reason why the L2 learners' correct responses to E-type pronouns were high may be due to positive transfer. Finally, we maintain that as a condition of variable binding, singular dependent terms are preferred over plural dependent terms by the L2 learners.

II.   AN OVERVIEW OF VARIABLE BINDING AND SOME CONDITIONS

2.1. The C-command Condition

It is important to note that Korean reflexives and English reflexives must be c-commanded by their antecedents:

(1) *[$_{NP}$ Motuni$_i$-uy   nwui]-ka caki$_i$/caki-casin$_i$-ul onghohayssta.
     everyone-GEN   sister-NOM self/self-self-ACC defended
     (Everyone's sister defended self/self-self.)

The ungrammaticality of (1) is attributed to the fact that the Korean reflexives *caki* 'self' and *caki-casin*

'self-self' are not c-commanded by their antecedent *everyone*. Quite interestingly, the English anaphor *himself* exhibit this property as well:

(2) *Everyone$_i$'s brother defended himself$_i$.

As the status of (2) suggests, the English reflexive *himself* is not c-commanded by *everyone* and hence the ungrammaticality. This in turn suggests that this c-command requirement for Korean as well as for English reflexives is the prerequisite for variable binding.

2.2. TSC and SSC

It is interesting to note that unlike the English anaphor *himself*, Korean anaphors can appear in the subject position of the embedded clause:

(3) a. *Everyone$_i$ thinks that himself$_i$ is honest.
(4) a. Nwukwuna$_i$ caki$_i$-ka   cyengcikhata-ko sayngkakhanta.
     everyone self-NOM honest-COMP think
     (Everyone thinks that self is honest.)
 b. Nwukwuna$_i$ caki-casin$_i$-i   cyengcikhata-ko sayngkakhanta.
     everyone self-self-NOM honest-COMP think
     (Everyone thinks that self-self is honest.)
c. Nwukwuna$_i$ ku-casin$_i$-i   cyengcikhata-ko sayngkakhanta.
     everyone he-self-NOM honest-COMP think
     (Everyone thinks that he-self is honest.)

As exemplified in (3) and (4), the Korean monomorphemic anaphor *caki* 'self' and the Korean polymorphemic anaphors *caki-casin* 'self-self' and *ku-casin* 'he-self' and the English anaphor *himself* are different in many aspects. What this suggests is that the Korean monomorphemic anaphor *caki* 'self' and the Korean polymorphemic anaphors *caki-casin* 'self-self' and *ku-casin* 'he-self' cannot be treated on a par with the English anaphor *himself*. More specifically, the English anaphor *himself* reveals the presence of Tensed S Condition, whereas Korean anaphors reveal the absence of the Tensed S Condition. This condition states that an anaphor cannot appear in the subject position of the embedded clause.

Unlike the English anaphor *himself*, the Korean monomorphemic anaphor *caki* 'self' reveals the absence of Specified Subject Condition in Korean:

(5) *Everyone$_i$ believes that Mary loves himself$_i$.

(6) Nwukwuna$_i$ [Mary$_j$-ka caki$_{i/j}$-lul cohahanta]-ko mitnunta.
    everyone   NOM self-ACC like-COMP believe
    (Everyone believes that Mary likes self.)

As illustrated in (6), the Korean monomorphemic anaphor *caki* 'self' can take either a local antecedent or a non-local antecedent, whereas the English anaphor *himself* can only take a local antecedent. To be more specific, in (6), the embedded subject *Mary* does not block ₊subject binding. As the status of (5) and (6) suggests, the Korean monomorphemic anaphor *caki* 'self' reveals the absence of the Specified Subject Condition, whereas the English anaphor *himself* reveals the presence of the SSC effect. It should be noted, however, that the Korean polymorphemic anaphors *caki-casin* 'self-self' and *ku-casin* 'he-self' demonstrate the presence of the Specified Subject Condition effect:

(6)   Nwukwuna$_i$ [Bill$_j$-i   caki-casin$_{*i/j}$-ul miwyehanta]-ko mitnunta.
    everyone   NOM self-self-ACC hate-COMP believe
   (Everyone believes that Bill hates self-self.)
(7) Nwukwuna$_i$ [Bill$_j$-i ku-casin$_{*i/j}$-ul miyehanta]-ko mitnunta.
    everyone   NOM he-self-ACC hate-COMP believe
   (Everyone believes that Bill hates he-self.)
As indicated in (6) and (7), the intervention of the embedded subject *Bill* blocks subject binding across it, hence implying that Korean polymorphemic anaphors *caki-casin* 'self-self' and *ku-casin* 'he-self' demonstrate the presence of the SSC effect.

2.3. Subject-orientation

It is worth pointing out that the Korean monomorphemic *caki* 'self' permits LD-binding as well as local binding. It is worthwhile noting, on the other hand, that *caki*'s antecedent must be the subject of a sentence (subject-orientation). More interestingly, the English anaphor *himself* does not exhibit either of these properties:

(8) Everyone$_i$ told Bill$_j$ a rumor about himself$_{i/j}$.
(9) Everyone$_i$ thought that Bill$_j$ hated himself$_{*i/j}$.

As illustrated in (8), the English anaphor *himself* demonstrates the absence of Subject Antecedent Condition (subject-orientation). In (8), coindexing the subject *everyone* and the object *Bill* with *himself* exhibits the property of subject binding and object binding. This in turn suggests that the English

anaphor *himself* lacks the property of Subject Antecedent Condition (subject-orientation). It must be noted, however, that the Korean monomorphemic anaphor *caki* 'self' reveals the property of Subject Antecedent Condition (subject-orientation):

(10) Nwukwuna$_i$ Bill$_j$-eykey [Mary$_k$-ka caki$_{i/*j/k}$-lul cohahanta]-ko malhayssta.
      everyone   DAT   NOM self-ACC like-COMP said
      (Everyone said to Bill that Mary likes self.)

The *caki*-binding by the matrix subject *everyone* and the embedded subject *Mary* shows *caki*'s property of local binding and LD-binding, which in turn indicates that *caki*'s antecedent must be the subject of a sentence (subject-orientation).

2.4. Possessive Reflexives

Unlike the English anaphor *himself*, the Korean monomorphemic anaphor *caki* 'self', and the Korean polymorphemic anaphors *caki-casin* 'self-self' *and ku-casin* 'he-self' can occur in the possessive position, as indicated in (11a), (11b), and (11c), whereas the English anaphor *himself* cannot:

(11) a. Nwukwuna$_i$ caki$_i$-uy emeni-lul cohahanta.
      everyone self-GEN mother-ACC like
      (Everyone likes his mother.)
   b.   Nwukwuna$_i$ caki-casin$_i$-uy   emeni-lul cohahanta.
      everyone self-self-GEN mother-ACC like
      (Everyone likes his mother.)
c. Nwukwuna$_i$ ku-casin$_i$-uy emeni-lul   cohahanta.
      everyone he-self-GEN mother-ACC like
      (Everyone likes his mother.)
(12) *John likes himself's mother.

2.5. Singularity and Plurality
It is important to note that the Korean overt pronoun *ku-tul* 'they' is bound to quantifiers, whereas the Korean singular pronoun *ku* 'he' cannot:

(13)   *Nwukwuna$_i$ [ku$_i$-ka   cyengcikhata]-ko mitnunta.
      everyone he-NOM honest-COMP believe
      (Everyone believes that he is honest.)
(14) Nwukwuna$_i$ [ku-tul$_i$-i   cyengcikhata]-ko mitnunta.
      everyone he-pl-NOM honest-COMP believe
      (Everyone believes that he is honest.)

It is worth noting that pronominal variable binding in Korean is subject to a number feature. As Aoun and Hornstein (1986, 1991) argue for Chinese,

Korean variable binding of *ku'* he' and *ku-tul* 'they' is not subject to some locality condition. Simply put, the number feature does something, but locality plays no role. What (14) suggests is that there is a restriction on the number feature. That is, if we have a closer look at (13) and (14), we can find out that the Korean pronouns *ku* 'he' and *ku-tul* 'they' are sensitive to this feature. The reason why (14) allows variable binding, but (13) cannot is that the Korean quantifier *nwukwuna* is plural in number since it includes a group of people. More specifically, (13) is ungrammatical since the antecedent of *ku* 'he' is plural and *ku* 'he' is singular, thus implying that there is no number agreement. However, (14) is grammatical   since   the   quantifier   *nwukwna* 'everyone' and *ku-tul* 'they' are plural in number, which in turn suggests that there is   agreement between *nwukwuna* 'everyone' and *ku-tul* 'they' in number. Notice, however, that variable binding in English is not sensitive to this number feature:

(15) Everyone is proud of his mother.
(16) Everyone outwitted their adversary.

As seen above, variable binding is available, thus implying that both singularity and plurality induce variable binding. This in turn indicates that variable binding in Korean is subject to number agreement, whereas variable binding in English is not.
It is worthwhile noting that in the case of Korean anaphors, they permit variable binding, despite number disagreement:

(17) Nwukwuna$_i$ caki-casin$_i$-ul kyeklyehayssta.
   everyone   self-self-ACC encouraged
   (Everyone encouraged self-self.)
(18) Nwukwuna$_i$ caki-casin-tul$_i$-ul kyeklyehayssta.
   everyone self-self-pl-ACC encouraged
   (Everyone encouraged self-self-pl.)

As the status of (17) and (18) suggests, variable binding is not sensitive to the number feature. Exactly the same can be said of English:

(19) Everyone encouraged himself.
(20) Everyone outwitted themselves.
(21) Someone outwitted themselves.

As can be seen from (19), (20), and (21), variable binding is available whether or not dependent terms are singular. From all of this, it is clear that in the case of Korean anaphors and English anaphors, the number feature plays no role in variable binding.

III.   Methods

3.1. The goal of experiments

The goal of this experiment is to provide answers to the following questions: Do the L2 learners know that singularity and plurality play a crucial role in variable binding? Does transfer activate L2 learning? Do they have knowledge of E-type pronouns? Do they know the difference among *every*-type QPs, *someone*-type QPs and *no*-type QPs? Do they have any acquisition order about them? Of singularity and plurality, which one do they prefer?

3.3. Subjects

Twenty Korean learners of English participated in this experiment. They attended my class (global English). I carried out a survey during the spring semester in 2022. I explained the phenomenon of variable binding, but I did not provide any knowledge of singularity and plurality. The survey lasted for about thirty minutes without any feedback.

IV.   Results

In this experiment, I included the following two sentences to see whether or not the L2 learners know the fact that *every*-type QPs and *no*-type QPs behave differently with respect to variable binding:

(22) Everyone is proud of himself.
(23) No one blamed himself.

Note that variable binding in English requires singular dependent terms or plural dependent terms. This amounts to saying that *every*-type QPs in English are not sensitive to a number feature. The same can be said of Korean:

(24) Nwukwuna$_i$ caki-casin$_i$-ul calangsulewyehanta.
   everyone self-self-ACC proud
   (Everyone is proud of himself.)
(25)   Nwukwuna$_i$ caki-casin-tul$_i$-ul calangsulewyehanta.
   everyone self-self-ACC proud
   (Everyone is proud of themselves.)

As illustrated in (24) and (25), singular dependent terms and plural dependent terms easily induce variable binding. This provides the possibility that positive transfer activates the L2 learning. It is interesting to note that the L2 learners' correct responses to (22) were 95%, whereas their incorrect responses to (22) were 5%. An important question that naturally arises is "Why did this take place?" We wish to argue that the reason why high percentage took place may be that Korean and English have a commonality with respect to the

property of *every*-type QPs. That is to say, the commonality activates the L2 learning. It can thus be inferred that transfer plays a role in the L2 learning. It must be noted, however, that the L2 learners' correct responses to (23) were 75%, whereas their incorrect responses to (23) were 25%. An immediate question is "Why did this happen?" We wish to contend that English and Korean exhibit a different property with regard to *no*-type QPs. More specifically, singular dependent terms in English easily yield variable binding, whereas plural dependent terms in English cannot. It should be noted, however, that variable binding in Korean is available with both singular dependent terms and plural dependent terms, as indicated in (26) and (27):

(26)   Enunwukwuto$_i$ caki-casin$_i$-ul pinanhacianhassta.
   no one   self-self-ACC blame-not
   (No one blamed himself.)
(27)   Enunwukwuto$_i$ caki-casin$_i$-tul-ul pinanhacianhassta.
   no one   self-self-pl-ACC blame-not
   (No one blamed themselves.)

As exemplified in (26) and (27), singular dependent terms and plural dependent terms easily induce variable binding with *no*-type QPs. Why the L2 learners' correct responses to (23) were lower than (22) may be that *no*-type QPs in English and Korean behave differently with respect to variable binding. Simply put, Korean permits variable binding with singularity and plurality, whereas English yields it only with singularity. We thus conclude that the Korean learners of English acquired *every*-type QPs before *no*-type QPs.

In this experiment, I included (28) to assess whether the L2 learners have the knowledge that English pronouns induce variable binding with singularity. Notice that variable binding in Korean is available with plural pronouns, but it cannot with singular pronouns:

(28) Everyone here thinks that he is a nice fellow.
(29) *Nwukwuna$_i$ ku$_i$-ka   mescin nyesek-ila-ko sayngkakhanta.
   everyone he-NOM nice fellow-be-COMP think
   (Everyone thinks that he is a nice fellow.)
(30) Nwukwuna$_i$ ku-tul$_i$-i   mescin nyesek-ila-ko sayngkakhanta.
   everyone he-pl-NOM nice   fellow-be-COMP think
   (Everyone thinks that he-pl is a nice fellow.)

It is worthwhile pointing out that the L2 learners' correct responses to (28) were 65%, whereas their incorrect responses to (28) were 35%. An important question is "Why did low correct responses take place?" We wish to maintain that variable binding in English is possible with singular pronouns, whereas in Korean, it is not possible with singular pronouns. As observed earlier, the quantifier *nwukwuna* 'everyone is plural in number and thus variable binding is possible with plural pronouns. That is, Korean overt pronouns are sensitive to the number feature with respect to variable binding. It is thus reasonable to assume that low correct responses have to do with the difference between Korean and English.

I included (31) to assess the knowledge of E-type pronouns:

(31) Everyone went to the party and John met him there.
(32) John bought some sheep, and Hary vaccinated them.

Evans (1980) proposes that the English pronoun *them* in (32) is an instance of what he calls E-type pronouns and it must be interpreted as the plural definite description, namely the sheep John bought. Exactly the same can be said about (31). In (31), the English pronoun *him* is not interpreted as a bound variable. Quite interestingly, 75% of the L2 learners thought of (31) as ungrammatical. More specifically, 75% of the Korean learners of English thought that in (31), the English pronoun *him* is not construed as a bound variable. This may have taken place due to the fact that Korean exhibits the same property, namely positive transfer:

(33) *Motun slam$_i$-i party-e kassko John-un ku$_i$-lul kekise mannassta.
    everyone   at went-and TOP he-ACC there met
    (Everyone went to the party and John met him there.)
(34) Motun slam$_i$-i party-e kassko John-un ku-tul$_i$-ul kekise mannassta.
    everyone   at went-and TOP he-ACC there met
    (Everyone went to the party and John met them there.)

As the status of (33) suggests, the Korean overt pronoun *ku* 'he' cannot refer to *motun salam* 'everyone' and thus it cannot be construed as a bound variable. Furthermore, the Korean singular pronoun *ku* 'he' cannot behave as an E-type

pronoun. It should be noted, however, that the Korean plural pronoun *ku-tul* 'them' can occur as an E-type pronoun, as indicated in (34). The reason why this takes place is that the quantifier *motun salam* is plural in number and *ku-tul* 'them' is also plural, thus implying that the QP agrees in number with the dependent term *ku-tul* 'they'. Thus, it is reasonable to assume that English and Korean have a commonality. This in turn suggests that positive transfer activates the L2 learning.

I included (35) to evaluate the fact that the English plural pronoun *ku-tul* 'they' induces a group reading and a bound variable reading:

(35) Many students$_i$ believe that they$_i$ are intelligent.
(a) A group reading: There is a group G of many students, each of whom is an x such that x believes a group of students are all intelligent.
(b) A BVA reading: (Many x: x a student) x believes that x is intelligent.

It is worth mentioning that 75% of the L2 learners thought that (35) yields variable binding. More interestingly, the English pronoun *they* induces a group reading and a bound variable reading. An important question is "Why are the L2 learners' correct responses high? We wish to argue that the assumption that plural dependent terms induce variable binding may be universal, as illustrated in (36):

(36) [Muchos estudiantes] creen que [pro] son intelligents.
    (Many students believe that they are intelligent.)
As Montalbetti (1984) points out, in Spanish, the empty pronoun pro yields a bound variable reading. The same applies to Korean:
(37) Manhun haksangtul$_i$-i ku-tul$_i$-i ttokttokhata-ko mitnunta.
    many   students-NOM they-NOM intelligent-COMP believe
    (Many students believe that they are intelligent.)

It is worthwhile noting that the Korean plural pronoun *ku-tul* 'they' exhibits the same property as the English plural pronoun *they*. Simply put, variable binding and a group reading are possible with them. Chomsky's (1981, 1986) universal grammar that there are universal properties in world languages seems to play a role in accounting for variable binding of plural dependent terms. Note that L2 learners learn universal grammar before particular grammars.

I also included (38) and (39) to evaluate the fact that *every*-type QPs permit variable binding with plural pronouns:

(38) Everyone$_i$ assumes John outwitted them$_i$.
(39) Everyone$_i$ was outwitted by their$_i$ adversary.

It is interesting to note that *every*-type QPs allow variable binding with plural pronouns. The L2 learners' correct responses to (38) were 65%, whereas their incorrect responses to (38) were 35%. On the other hand, the L2 learners' correct responses to (39) were 75%, whereas their incorrect responses to (39) were 25%. This in turn indicates that nearly two thirds of the L2 learners acquired the fact that *every*-type QPs yield variable binding with plural pronouns. As observed earlier, *every*-type QPs in Korean require the plural pronoun *ku-tul* 'they', but not the singular pronoun *ku* 'he'. Note, however, that *every*-type QPs in English permit variable binding with singular pronouns or plural pronouns.

Finally, I included (40) to assess the fact that *someone*-type QPs permit variable binding with plural dependent terms:

(40) Someone outwitted their adversary.

The L2 learners' correct responses to (40) were 55%, whereas their incorrect responses to (40) were 45%. An immediate question that naturally arises is "Why are the L2 learners' correct responses low?" We wish to maintain that *someone*-type QPs in Korean do not yield variable binding with the plural pronoun *ku-tul* 'they. Notice, however, that they induce variable binding with the singular pronoun *ku* 'he':

(41)   *Nwukwunka$_i$ ku-tul$_i$-uy   yekkyeng-ul ikyenaysSta.
    someone   they-GEN adversary-ACC outwitted
    (Someone outwitted their adversary.)
(42) Nwukwunka$_i$ ku$_i$-uy yekkyeng-ul ikyenaysSta.
    someone   he-GEN adversary-ACC outwitted
    (Someone outwitted his adversary.)

As exemplified in (41) and (42), the singular pronoun *ku* 'he' easily induces variable binding with *someone*-type QPs, but the plural pronoun *ku-tul* 'they' cannot. This in turn suggests that Korean and English do not a commonality with respect to *someone*-type QPs. Thus, it is reasonable to assume that positive transfer does not work here. Yet, the L2 learners may have depended on their L1 to learn the

knowledge of *someone*-type QPs. Consequently, some errors arose due to negative transfer. Simply put, the L2 learners thought of *someone*-type QPs in English and Korean as identical, hence low correct responses. We thus conclude that the L2 learners' acquisition difficulty with respect to *someone*-type QPs comes from negative transfer.

V.   DISCUSSION

To begin with, we aim to consider the L2 learners' acquisition order with respect to *every*-type QPs, *someone*-type QPs, and *no*-type QPs. As observed earlier, *every*-type QPs in English induce variable binding with singular reflexives or plural reflexives. More specifically, variable binding in English is not sensitive to the number feature. Exactly the same can be said of Korean. *Every*-type QPs in Korean permit variable binding with singular reflexives or plural reflexives. It is thus reasonable to assume that positive transfer (Ellis 2015) is available here with respect to variable binding. It should be noted, however, that *every*-type QPs in English induce variable binding with singular pronouns or plural pronouns, whereas *every*-type QPs in Korean permit it only with plural pronouns. That is, Korean and English exhibit a different property with respect to pronominal variable binding. Note that the L2 learners' correct responses to *every*-type QPs (22) were 95%. It should be pointed out, on the other hand that the L2 learners' correct responses to *no*-type QPs (23) were 75%. The reason why the L2 learners' correct responses to *no*-type QPs were lower than *every*-type QPs may be that Korean and English show a different property with respect to *no*-type QPs. More specifically, *no*-type QPs in English induce variable binding only with singularity, whereas *no*-type QPs in Korean permit it with singularity or plurality. It is worth pointing out that *someone*-type QPs in English induce variable binding with singularity or plurality, whereas *someone*-type QPs in Korean permit it only with singularity ((41) and (42)). The L2 learners' correct responses to *someone*-type QPs were 55%, which may have happened due to the fact that Korean and English exhibit a different property with respect to *someone*-type QPs. From all of this, it is clear that variable binding of *every*-type QPs was the first acquired by the L2 learners, followed by that of *no*-type QPs, and that of *someone*-type QPs, in that order. The following graph shows the L2 learners' acquisition order with respect to *every*-type QPs, *someone*-type QPs, and *no*-type QPs:

Figure 1 L2 Learners' Acquisition Order
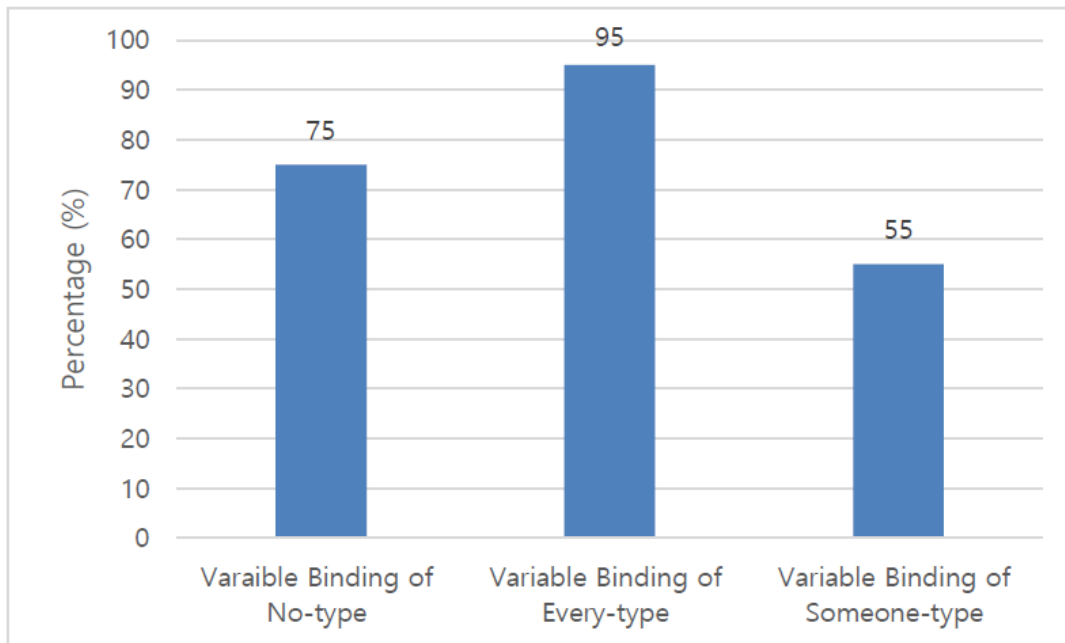
Now attention is paid to the L2 learners' acquisition of E-type pronouns. Note that the L2 learners' correct responses to E-type pronouns were 75%. As observed earlier, 75% of the Korean learners of English thought that in (43), the English pronoun *him* is not interpreted as a bound variable:

(43) Everyone went to the party and John met him there.

Notice that the c-command condition for Korean as well as for English reflexives is the prerequisite for variable binding. As illustrated in (43), *him* is not c-commanded by the QP *everyone*, thus not inducing variable binding. Most importantly, singular pronouns in Korean are not used as E-type pronouns. E-type pronouns must be plural and are not c-commanded by QPs. This in turn indicates that nearly two thirds of the L2 learners acquired the c-command condition and the plurality condition of E-type pronouns. The reason why this took place may be that E-type pronouns in Korean are also plural, as indicated in (44) and (45):

(44) *Motun slam$_i$-i party-e kassko John-un ku$_i$-lul kekise mannassta.
    everyone   at went-and TOP he-ACC there met
   (Everyone went to the party and John met him there.)

(45) Motun slam$_i$-i party-e kassko John-un ku-tul$_i$-ul kekise mannassta.
    everyone   at went-and TOP he-pl-ACC there met
   (Everyone went to the party and John met them there.)

As the status of (44) and (45) suggests, only the plural pronoun *ku-tul* 'they' can be E-type pronouns. It seems thus reasonable to assume that the reason why the L2 learners' correct responses were high may be due to positive transfer (Ellis 2016).

Finally, we wish to argue that as a condition of variable binding, the L2 learners acquired singular dependent terms before plural dependent terms. Note that the L2 learners preferred using singular dependent terms rather than using plural dependent terms. More specifically, the L2 learners' correct responses to singular dependent terms ((22), (23), and (28)) were 95%, 75%, 65%, respectively. On the other hand, the L2 learners' correct responses to plural dependent terms ((35), (38), (39), and (40)) were 75%, 65%, 75%, and 55%, respectively. This in turn shows that as a condition of variable binding, the L2 learners preferred singular dependent terms to plural dependent terms and they acquired singular dependent terms before plural dependent terms. We thus conclude that as a condition of variable binding, singular dependent terms are preferred over plural dependent terms by the L2 learners.

VI.   CONCLUSION

To sum up, we have provided an analysis of the L2 learners' acquisition of variable binding. In section 2, we have discussed some conditions of variable binding. In section 4, we have argued that *every*-type QPs and *no*-type QPs behave differently with respect to variable binding. We have also argued that English pronouns induce variable binding with singularity, whereas Korean pronouns allow variable binding only with plurality. We have maintained that English and Korean have a commonality with E-type pronouns. This in turn suggests that positive transfer activates the L2 learning. We have also contended that the assumption that plural dependent terms induce variable binding may be universal. We have further argued that the L2 learners' acquisition difficulty with respect to *someone*-type QPs comes from negative transfer. In section 5, we have contended that variable binding of *every*-type QPs was the first acquired by the L2 learners, followed by that of *no*-type QPs, and that of *someone*-type QPs. We have also argued that the reason why the L2 learners' correct responses to E-type pronouns were high may be due to positive transfer. Finally, we have argued that as a condition of variable binding, singular dependent terms are preferred over plural dependent terms by the L2 learners.

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