

Ambiguity of Response Particles to Negative Utterances in Korean and English

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ABSTRACT

This study explores the ambiguity of Korean response particles (RP) *ung* 'yes' and *ani* 'no' responding to long form negation (LFN), in comparison to the ambiguity of RPs to the so-called "high negation" and "low negation" in English. The results show that i) the ambiguity of Korean LFN is due to two possible interpretations, *i.e.*, pragmatic and literal, ii) Korean RPs are anaphors, supporting Krifka's (2013) propositional anaphoric approach to English RPs, but iii) they refer to only one antecedent from the preceding proposition, that is, for the outermost NegP only, for both SFN (short form negation) and LFN. In contrast, the ambiguity of English *high negation* is two-fold. One type of ambiguity is due to the two possible interpretations of high negation, pragmatic versus literal, just like Korean; the other type of ambiguity occurs within the literal meaning of high negation and is due to the availability of multiple antecedents, just like with English *low negation*.

Keywords: response particle, ambiguity, long form negation, short form negation, high negation

1. Introduction

It is well known that Korean and English have different patterns of polarity response to a negative utterance. To a negative utterance as in (1a) or (1b), *yes* still tends to mean positive polar interpretation of the sentence and *no* negative as seen in (1B).

- (1) a. A: Lina did not eat the cookie.
b. A: Did Lina not eat the cookie?
B: Yes, she did.
No, she didn't.

* I appreciate valuable comments of anonymous reviewers. All the errors and fallacies are of course my own.

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However, the reverse pattern of response particles (RP) is also possible seen in (2), where *yes* means a negative proposition and *no* a positive one as responses to the same negative utterance.

- (2) a. A: Lina did not eat the cookie.
 b. A: Did Lina not eat the cookie?
 B: Yes, she didn't.
 No, she did.

As shown by the four possible patterns in (1) and (2), English RPs *yes* and *no* both are ambiguous, each of which can either mean p (where p =Lina ate the cookie) or $\neg p$.

In Korean, contrarily, the affirmative RP *nay/ung* 'yes' to a negative utterance is not allowed for positive propositional interpretation and *ani* 'no' is not for negative interpretation as shown in (3B).

- (3) a. A: Lina-ka cookie-lul an-mekess-e. 'Lina ate a cookie.'
 NOM ACC Neg.ate-DECL
 b. A: Lina-ka cookie-lul an-mekess-ni? 'Did Lina eat a cookie?'
 NOM ACC Neg.ate- Q
 B: ung, (an-mekess-e). / *ung, (mekess-e).
 yes, (not-ate-DECL)/ yes, (ate-DECL)
 ani, (mekess-e). / *ani, (an-mekess-e).
 no, (ate-DECL)/ no, (not-ate-DECL)

But sometimes, even in Korean, the positive RP for a positive and negative RP for a negative interpretation, is possible, especially for the so-called 'long form negation', as illustrated in (4).

- (4) Lina-ka cookie-lul mek-ci anhass-ni?¹⁾
 NOM ACC eat-NMLZ not.did-Q 'Didn't Lina eat a cookie?'
 a. ung, mekesse. / ani, anmekess-e.
 yes, ate-DECL / no, not.ate-DECL
 b. ung, an-mekess-e. / ani, mekess-e.
 yes, not-ate-DECL / no, ate-DECL

1) Each reading can be accompanied by a specific kind of prosody, which I will not delve into in the current study.

As for the sources of the dual nature of English RPs as shown in (1) and (2), there have been various syntactic and semantic proposals. Holmberg (2012) and Kramer & Rawlins (2011) propose two or more syntactic structures as the sources of the ambiguity, and Farkas & Roelofsen (2012) and Krifka (2013) provide semantic accounts. Farkas & Roelofsen (2012) assume two possible functions of response particles, *absolute* and *relative* functions, while Krifka (2013) claims for two possible discourse referents as antecedents available from the previous utterance that RPs as anaphors can refer back to.

This study concerns Korean response particles and their interpretations especially about the ambiguity of Korean RPs to long form negation observed in (4) in comparison to that of English RPs. Specifically, I will show the following points.

First, although Korean long-form negative questions seem to allow ambiguity for the following RPs as in (4), they are fundamentally different from the ambiguity of RPs of English negative utterances in (1) and (2). I will show that this ambiguity is not a semantically truth functional phenomenon, but due to a pragmatic interpretation. Second, Korean long-form negation is similar to the so-called 'high negation' of English. But there is a difference between Korean long-form negation and English high negation. English high negation is doubly ambiguous: One kind of ambiguity is due to pragmatic/literal interpretation distinctions, and the other kind of ambiguity occurs within the literal interpretation. But the ambiguity of Korean long-form negation is only due to pragmatic/literal interpretation distinctions. I will discuss these issues based on Krifka's (2013) anaphoric account on RPs.

Section 2 is the review of Krifka's (2013) anaphoric account for English RPs, section 3 shows that Korean RPs can be also analyzed by Krifka's account, section 4 shows how the ambiguity of Korean long-form negation is different from that of English high negation, and section 5 is the conclusion.

In the next section, I will start this discussion with reviewing the propositional anaphoric analysis of English RPs proposed by Krifka (2013).

2. Propositional Anaphoric Approach

Krifka (2013) proposes a discourse semantic account of the dual interpretations of RPs. He claims that i) the salient antecedent propositions introduce discourse referents (as Asher, 1986; Cornish, 1992; Geurts, 1998; Frank, 1996 also assumed existence of such propositional discourse referents) and that ii) RPs are anaphors

that pick up these referents as the antecedents. In (5), the proposition in the sentence introduces a discourse referent *d* and *it* refers to *d* as the antecedent.

- (5) [*Ede stole the cookie*]. *Bill knows [it]*.
 $\hookrightarrow d_{\text{prop}}$ $\uparrow d$
 (\hookrightarrow : introduction, \uparrow : uptake)
 (6) *Ede stole the cookie. Bill saw it.*

Krifka further claims that not only a proposition but also an event introduces a discourse referent. The pronoun *it* in (6) refers to the event of *Ede's stealing the cookie*. The following structure is an illustration of the layers of syntactic categories along with the semantic counterparts, *i.e.*, the discourse referents that Krifka proposes, for a positive sentence:

- (7) [_{ActP} ASSERT [_{TP} *Ede steal-PAST* [_{VP} *t_{Ede} t_{steal} the cookie*]]]
 $\hookrightarrow d_{\text{prop}}$ $\hookrightarrow d'_{\text{event}}$

In case of a negative sentence, Krifka assumes existence of a positive proposition by TP under NegP as well as the negative proposition by NegP, yielding three different discourse referents, as represented in (8).²

- (8) [_{ActP} ASSERT [_{NegP} *Ede did-n't* [_{TP} *t_{Ede} t_{did}* [_{VP} *t_{Ede} t_{steal} steal the cookie*]]]³
 $\hookrightarrow d'_{\text{prop}}$ $\hookrightarrow d''_{\text{prop}}$ $\hookrightarrow d'''_{\text{event}}$

According to him, *d'''* is not accessible due to negation but *d''* for positive proposition is still accessible considering availability of the following discourse.

- (9) *Ede didn't steal the cookie, a. and he actually can prove it.*
 b. *even though people believed it.*

2) Krifka's justification of the position of NegP over TP is provided in his footnote 3) as follows: "It is often assumed that NegP is a category under TP, following Pollock 1989. The main argument is that NPIs do not occur in subject position. However, negation clearly scopes over tense; *Ede didn't steal the cookie* says that within the reference time, there was no stealing event, not that there was an event that was not a stealing."

3) Krifka(2013) assumes another discourse referent for the ActP, too. Since this discourse referent is not relevant for the current study, I would just omit it for simplification.

The pronoun *it* in (9a) is for the negative proposition (corresponding to d'_{prop} above) whereas that in (9b) is for the positive one (corresponding to d''_{prop} above).

Given that these multiple discourse referents from the preceding utterance are available, the function of English RPs *yes* and *no* are to pick one of the available antecedents and assert its truth as in (10) on Krikfa's analysis. And RPs are independent ActPs themselves as represented in (11):

- (10) a. *yes* picks up salient proposition DR d and asserts it: ASSERT(d)
 b. *no* picks up salient negative proposition $\neg d$ and asserts it: ASSERT($\neg d$)

- (11) $\llbracket [_{ActP} \textit{yes}] \rrbracket = \text{ASSERT}(d)$
 $\llbracket [_{ActP} \textit{no}] \rrbracket = \text{ASSERT}(\neg d)$

So in this analysis, given that two discourse referents d' (for positive) and d (for negative) are available from a negative antecedent clause as in (12), *yes* and *no* end up having two options, either pick d or d' , resulting in four possible combinations as in (13):

- (12) $[_{ActP} \text{ASSERT} [_{NegP} \textit{Ede did-n't} [_{TP} t_{Ede} t_{did} \textit{steal he cookie}]]]$
 $\quad \quad \quad \hookrightarrow d_{prop} \quad \quad \quad \hookrightarrow d'_{prop}$

- (13) a. *Yes*. ASSERT(d') 'Yes, he did!'
 b. *Yes*. ASSERT(d) 'Yes, he didn't.'
 c. *No*. ASSERT($\neg d'$) 'No (he didn't).'
 d. *No*. ASSERT($\neg d$) 'No, he did!'

In this analysis, the ambivalent behaviour of English RPs emerging when used as responses to negative utterances is explained by availability of two different possible *antecedents* of the anaphoric RPs.

In my other work, I support Krikfa's analysis by showing that Korean RPs are also anaphors, but I also claim that Korean RPs can get access to only one antecedent discourse referent, which can explain non-ambiguity of Korean RPs as in (3).

For the current study, I will also adopt Krikfa's anaphoric approach to RPs to Korean *long-form negation* as in (4), which can potentially provide two possible discourse referents as antecedents of RP as in (2) and also manifest ambiguous interpretations like English negative utterances seen in (1) and (2). However, I will

show that this ambiguity involved with Korean long-form negation is not due to two possible discourse referents as in English cases like (12), but due to a pragmatic inference, and reconfirm that Korean RPs can get access to only one discourse referent, but not multiple ones, even in long-form negations.

For this, in the next section, I will first review my argument on why Korean RPs can also be considered as anaphors supporting Krifka's idea.

3. Anaphoricity of RPs in Korean

In Wee(2019), I claimed that there is another positive response particle, namely *kita*, in addition to the usual response particles, *ung* 'yes' and *ani* 'no'. I argued that this expression should be considered as the genuine positive counterpart to negative RP *ani*, considering the following example in (14).⁴⁾

- (14) A: ne-ka ku kkocpyung-ul kkae- ss- ni?
 you NOM that vase ACC break past Q
 "Did you break the vase?"
- B:
- A': ki-ya ani-ya?
 that DECL not DECL "Is it or not?"
- k i-ta ani-ta mal-ul ha- y.
 yes no speech ACC do JUSS
 "Tell me whether it is the case or not."

It is obvious that expression *kiya* in (14A') serves as the positive counterpart to the negative RP *aniya*, which should be considered as the abbreviated expression from *kukesiya*, consisting of pronoun *kukes* 'that thing', copula *i*, and the ender *ya*, as represented in (15). The pronoun *kukes* indicates anaphoric nature of this expression, and hence the negative counterpart *ani* can be considered as originating from the expression *kukes-i ani-ya* as glossed in (16):

4) This less common expression *ki-yo* may seem to be a dialectal expression, but it is listed in a dictionary as a standard expression. According to *Pyojunkukedaesajeon* 'Standard Korean Grand dictionary', *ki-ta*, which is infinitive form of *ki-yo*, is defined as an abbreviation of *kukes-ita*.

(15) ku-kes-i-ya
 that thing DECL ender
 " ___ is that/it."

(16) (ku-kes-i) ani-ya
 that thing NOM neg DECL ender
 " ___ is not that/it."

The common expression, *ung*, does not apparently show anaphoric nature, but existence of *kiya*, which is an anaphoric pronominal expression, reveals its anaphoric nature indirectly. In Wee (2019) I argued that this fact thus could suggest that the negative counterpart *aniya* should be also anaphoric with null pronominal subject as represented in (16). Based on this, I claimed that both *ung* and *ani* can be considered as functioning as anaphors. Considering this, I concluded that Korean RPs are anaphors that refer back to the discourse referent introduced by the antecedent clause as in Krifka (2013).⁵⁾

However, Korean RPs have a significant difference from English RPs, in that they only refer to one discourse referent, that is, the discourse referent available from the proposition for the outer NegP, but not any other inner propositions, preventing them from referring to the positive proposition for TP inside of the negative phrase, as seen in short negative clauses in (17):

- (17) a. A: Sumi-ka an- o-ass-e.
 NOM neg come past DECL ‘Sumi didn’t come.’
 b. A: Sumi-ka an - o a-ss-ni?
 NOM neg-come-past-Q ‘Did Sumi not come?’
- B: Ung, (an-o-ass-e)./ *ung, (o-ass-e).
 yes, (not-came-DECL) no, (came-DECL)
 Ani, (o-ass-e)./ *ani, (an o-ass-e).
 no, (come-DECL) no, (not-come-DECL)

This non-ambiguity indicates that Korean non-asserted embedded phrases cannot provide discourse referents d'_{prop} as the possible antecedents for the RPs, only offering the outer propositional discourse referent d_{prop} in representation (18) for (17a).

5) For some more discussion on the claim for anaphoricity of *kiyo* and *aniyo*, please refer to Wee (2019).

(18) [_{ActP} ASSERT[_{NegP} *Sumi-ka* an [_{TP} t_{Sumi} o-ss-e]]]
 NOM neg come past Q
 ↪_{d_{prop}} ↪_{d_{prop}}
 ‘Sumi didn’t come.’

Korean RPs are only targeting the truth value of the previously *asserted* or *preferred* proposition, but the inner propositions are not available as the antecedent of the anaphoric RPs. This indicates that Korean RPs have basically semantic functions and their concerns are limited to the truth conditional semantic aspect of the given utterance. English RPs, contrarily, can be regarded as having a syntactic aspect in the sense that they can take the proposition corresponding to the inner syntactic TP phrases, which is not directly relevant to the truth value of the asserted proposition, as equally as the final phrases as eligible candidates for the antecedents,

As for an account of non-ambiguity of RPs in Korean, we could consider Krifka’s (2013) explanation for the same phenomenon in Japanese, where the response particles *hai* and *iie* can act only as agreement and disagreement just like Korean *ung* and *ani*. Krifka suggests that Japanese RPs cannot refer to the positive propositional discourse referent because of a different nature of Japanese negation. He claims that negation in Japanese is *predicate negation*, which is not projected to a NegP, following Yabushita’s (1998) analysis, which is claimed to be the reason why Japanese negated clause introduces only one discourse referent. A positive proposition in a negated clause is syntactically unavailable, which explains the unambiguous interpretation of response particles *hai* and *iie*, according to Krifka. However, this does not seem to be a valid argumentation in Korean for the following reason.

It is well known that Korean has two types of negation; a long form and a short form as observed in section 1. Long form negation (LFN) requires *ha-support*, which corresponds to English *do-support*, and is postverbal as in (19a). Short form negation (SFN) does not require *ha-support* and is preverbal as in (19b).

(19) Korean long negation

a. *Sumi-ka o-ci ani ha-yess-ta.*
 NOM come-NMZ NEG do-PST-DECL ‘Sumi didn’t come.’

Korean short negation

b. *Sumi-ka an-oa-ss-ta.*
 NOM NEG come-PST-DECL ‘Sumi didn’t come.’

This fact shows that in Korean the embedded phrases do not have the ability of introducing discourse referents as the possible antecedents for the RPs regardless of the existence of embedded proposition, contrary to the prediction under Krifka's analysis. This observation indicates that Korean RPs serve as indicators of the truth value of the *asserted* proposition, but never treats the inner non-asserted propositions as equally as the final proposition. So Korean RPs function fundamentally *semantically* and only concerns the truth condition of the given utterance but not syntactic aspects, whereas English RPs can consider the inner propositions as equally as the final proposition, as noted previously.

However, this does not seem to be the whole story. The discussion so far seems to be valid only for LFN *declaration*. As noted in section 1, we have a counterexample to the above claim for Korean RPs that they are anaphoric to final phrase only, but not the inner phrases. In (4), we saw that LFN *questions* raise ambiguity just like English negative questions in (1) and (2).

- (4) Lina-ka cookie-lul mek-ci anhass-ni? 'Didn't Lina eat a cookie?'
 NOM ACC eat.NMLZ not.did-Q
 a. ung, mekesse. / ani, an-mekesse.
 yes, (not.ate.DECL) no, (not.ate.DECL)
 b. ung, an-mekesse. / ani, mekesse.
 yes, (not.ate.DECL) / no, (ate. DECL)

The positive RP *ung* can be interpreted as confirming either the positive proposition *p* as in (4a) or the negative proposition *notP* expressed in the antecedent questions as in (4b). Likewise, negative RP *ani* can be interpreted as both ways, too. In the next section, I will show that this ambiguity is *not* due to availability of multiple antecedent unlike English cases in (1) and (2).

4. Ambiguity of LFN in Korean and High Negation in English

4.1. Ambiguity of LFN in Korean

We saw that RPs for SNF (short form negation) questions can only function as confirmation or denial of the truth value of the outermost proposition expressed by the antecedent questions. We also saw that LFN (long form negation) questions allow ambiguous interpretations of RP unlike SNF questions, as seen in the

contrast of (3) and (4). However, here I claim that this ambiguity has different nature from that of English RPs to the negative question like (1) and (2).

The first difference of Korean LFN question from SFN question is that LFN question tends to be interpreted as a positive question rather than a negative one. The RPs to LFN thus also tend to be interpreted as such; *ung* tends to mean the positive version of proposition *P* and *ani* is likely to mean *notP*, in spite of the surface negated form of the question. This is an unexpected phenomenon considering that Korean negation never allows another discourse referent for the positive proposition under the proposition for NegP as noted above.

I claim that this type of interpretation in Korean is not the same phenomenon as the availability of double discourse referents of English negative utterances as in (1 and 4) or (12). Korean LFN that allows ambiguity for RPs is similar to a special type of negation that also exists in English as exemplified in (22).

(22) a. *Didn't Ede steal some cookie?*

b. [_{ActP} *did* [_{NegP} *not* [_{ActP} ASSERT [_{TP} *Ede t* *did steal some cookie*]]]]
 $\hookrightarrow d_{prop}$

This type of negation is first identified by Ladd (1981). According to him, the negation of such questions is not propositional negation. It is supposed to convey a positive-bias interpretation that the speaker has expectation or a bias toward the truth of the positive answer. In this construction, the negation is usually assumed to posit at a syntactically high position and thus is often called "high negation" or "preposed negation" as represented in (22b) (cf. Holmberg, 2012). This has been discussed by many authors (Büring & Gunlogson, 2000; Romero & Han, 2004; Krifka, 2013 among others).

There is a number of analyses for such questions. This type of negation is treated as a pragmatically special type, which is contrasted with 'low' negation, a neutral information-seeking question as in (1) or (2). Romero & Han (2004) and Romero (2005) propose that this type of questions interact with the VERUM operator. Krifka (2017) proposes that they express speech act of 'denegation'. In Krifka (2013), this type of questions is regarded as a "conversational move that can be performed when the speaker is inclined to believe the truth of the positive version of the proposition." According to Krifka (2013), this negation is not a propositional negation, but is interpreted at the level of speech act, and hence a discourse referent for the negated proposition is not introduced. He explains that 'high negation' thus

is regarded as delivering a non-negated *assertion* rather than a *question*, and hence they do not raise ambiguity for the answers *yes* and *no*.

Park & Dubinsky (2019) also take the similar position to Krifka (2013, 2017). They call this type of negatives '*proposition-external negation (PEN)*', because they have no effect on the propositional meaning of question, *i.e.* having the same interpretation as the positive propositions. Long form negation (LFN) more readily evokes this kind of interpretation (although it can also welcome a truth-conditional interpretation with a certain kind of prosody). When a long form negation question has a PEN reading, the interpretations of *yes/no* answers are also the same as those for positive question. On the other hand, they call the type of negations that influence on the semantic truth conditional meaning '*proposition-internal negation (PIN)*', which is illustrated in short form negation in Korean as in (3) that plays the usual semantic function of reversing the truth value of the positive counterpart.⁷⁾

The general consensus among the above mentioned authors is that high negation question is more readily interpreted as non-negated question, *i.e.* positive biased question, not usually entertaining ambiguous meaning of the RPs in the answers. *Yes* tends to mean *p* and *no* means *not-p*. However, this interpretation does not seem to be valid for every case of high negation. Let us discuss this issue in the next subsection.

4.2. Ambiguity of English high negation

Romero (2005) discusses a case where high negation is interpreted as a non-positive bias question and can be interpreted as both ways, positive and negative. (23) and (24) illustrate the case where *n't* can be interpreted ambiguously.

7) One reviewer points out that it is possible that SFN questions sometimes allow ambiguity when they can be interpreted as positive bias questions, which is explored in Ku (2004). An SFN question can be interpreted as a positive bias question. For instance, a question like 'Sumi-ka AN-osse?' meaning "Did Sumi NOT come?" can be uttered with a positive bias preconception, expressing surprise or unexpectedness of her not coming. I agree on this possibility and it is worthy to consider more extensively. Here I will just present a brief opinion on its difference from LFN which I can come up with. I think this positive bias interpretation of SFN is apparently similar to that of PEN of LFN of our concern here, but the possibility of responding with positive RP seems to be due to more pragmatically governed phenomenon. This type of interpretation can be paraphrased as 'I believed Sumi came, but isn't it true?'. When it is responded by the positive particle 'ung, osse' meaning 'Yes, she came', the replier is answering to the positive proposition that she assumes that the questioner should have in mind. In this sense, this type of positive bias interpretation of SFN does not seem to have any relation with the syntactic position of negation unlike Korean LFN or English high negation. I should leave a further investigation on this issue for the future.

(Particles are provided for disambiguating the readings.)

- (23) A: Ok, now that Stephan has come, we are all here. Let's go!
S: Isn't Jane coming (too)?
- (24) Scenario: Pat and Jane are two phonologists who are supposed to be speaking in our workshop on optimality and acquisition.
A: Pat is not coming. So we don't have any phonologists in the program.
S: Isn't Jane coming (either)? (From Romero 2005)

Here *n't* negation is interpreted either as p or $\neg p$, which shows that with a proper context, high negation can be interpreted as a negative question as well as a positive question.

The following is another example that illustrates a case where high negation can be interpreted as $\neg p$ as well as p .

- (25) a. Isn't Peter helping you already?
b. Isn't Peter helping you yet?
- (26) a. Isn't [Peter helping you already]?
b. Is[n't Peter helping you yet]?

Positive polarity item (PPI) *already* in (25a) indicates that negation is outside of the proposition as shown in the structure of (26a), whereas NPI *yet* in (25b) indicates that it is under the scope of negation, suggesting that negation is part of the proposition as represented in (26b). Considering availability of the ambiguity even for high negation, it should not be fair to regard this type of negation as an exceptional case as a whole which can be regarded as an extra-semantic, pragmatic phenomenon. Let us compare this type of negation with Korean LFN in (4).

We already saw in (4) that Korean long-form negated (LFN) questions also entertain ambiguous interpretations. Then, going back to this ambiguity issue, the questions raised at this point are i) whether the ambiguity of Korean LFN should be considered as the same as the ambiguity in English high negations as in (25) or that of English 'low' negation as in (1) and (2), and ii) how is the ambiguity of English high negation in (24) and (25) different from that of 'low' negation as in (1) and (2). These questions boil down to the question of whether the ambiguity of the three cases, English low negation, English high negation, and Korean long

form negation, are due to multiple antecedents suggested in Krifka's (2013) anaphoric approach. Speaking the conclusion first, my answer to this question is *no*. The reason of this is in the following subsection.

4.3. Ambiguity due to pragmatic and semantic meanings

Since we already adopted Krifka's (2013) anaphoric analysis relying on multiple discourse antecedents for an account of the ambiguity of English 'low' negation, I would concentrate on discussing the ambiguity of English 'high' negation and Korean LFN.

We saw that Korean LFN in (4) and English high negation in (24-25) have the same ambiguity. And we also saw that it is generally agreed among the scholars (Ladd, 1981; Romero & Han, 2004; Krifka, 2013, 2017; Park & Dubinsky, 2019) that the prominent reading of high negation is positive bias reading, which is considered as due to a pragmatic inference. Then the other reading should be non-positive biased, *i.e.* the truth conditional interpretation. For the former interpretation, English high negation has the same function as what Krifka (2013) calls 'denegation', or what Park & Dubinsky (2019) calls 'proposition external negation' (PEN). I agree on this idea for Korean LFN and claim that one of Korean LFN ambiguous interpretations is also not due to a truth conditional logical operation, but a pragmatic positive-bias interpretation.

However, for the second reading, *i.e.* the non-bias truth conditional negation, Korean LFN has a difference from that of English high negation. For this non-positive bias reading, English allows four possibilities just like short form negation. Let us first contemplate on ambiguity of English high negation. I will call the first reading the pragmatic meaning and the second reading the literal meaning. Then the two options in (26a, b) can be interpreted and answered as in (27) and (28), respectively.

- | | | |
|------|------------------------------------|----------------------------|
| (27) | Didn't [Peter come already]? | PEN (proposition external) |
| | Yes, he did. *No, he did. | PRAGMATIC=PPQ(positive |
| | *Yes, he didn't. No, he didn't. | polarity Q) |
| (28) | Did[n't Peter come yet]? | PIN (proposition internal) |
| | Yes, he didn't. No, he didn't. | LITERAL=NPQ(negative |
| | Yes, he did. No, he did. | polarity Q) |

As Park&Dubinsky suggest, English high negation is sometimes high enough to be pragmatically interpreted as a positive bias question as in (27), but also sometimes low enough to be interpreted as in (28), as low as low negation in (29).

(29) Did [Peter not come yet]? (low negation)

So when it is interpreted as high negation as represented in (27), it functions as a positive biased polarity question or proposition, but when it is interpreted as proposition internal as represented in (28), it functions the same as the low negations in (29). So the former case has the same meaning as the positive polarity question, having the pragmatic meaning or PEN(proposition external negation) meaning, whereas the latter case has the same meaning as the low negation question, with the literal meaning or PIN meaning. Thus in the pragmatic meaning, it has only two possibilities since it only yields one discourse antecedent as shown in (27'). But in the literal meaning, it entertains all four possible combinations of RPs, *i.e.* *yes* and *no*, for both positive and negative propositions as shown in (28') just like low negation cases in (12), repeated here.

(27') [_{ActP} *didn't-Q* [_{TP} *Peter t_{did} come already*]]]8)
 ↪ d'_{prop}

- a. *Yes*. ASSERT(d') 'Yes, he did!'
- b. **Yes*. ASSERT(d) 'Yes, he didn't.'
- c. *No*. ASSERT(¬d') 'No (he didn't).'
- d. **No*. ASSERT(¬d) 'No, he did!'

8) Krifka(2013) claims that this type of question should not be interpreted as a question, but it is a kind of request as noted in the representation in (12). He claims that (12) is interpreted as that the speaker believes that Ede stole some cookies and "wants to eliminate any reason to assert the opposite, and check whether the addressee would comply with this assumption of the speaker". Here I agree on his idea that this type of question is not really a negative question and thus not introduce a discourse referent, but I do not totally agree on his idea that this is a request, and thus I just use a different representation from Krifka's representation in (12), treating this as a question. Since ActP is not supposed to be a possible antecedent for the anphoric RPs here, the negation posited in ActP does not play a role in the interpretation of RPs.

Korean LFN with PIN (proposition internal negation)

- (32) [acik o-ci anhasse]? LITERAL=NPQ
 already come NMZ neg past DECL
 a. *ung, (imi) oass-e.
 yes, (already) came-DECL
 b. *ani, (acik) an-oass-e.
 no, (yet) not-came-DECL
 c. ung, (acik) an-oass-e.
 yes, (acik) not-came-DECL
 d. ani, (imi) oass-e.
 no, (already) came-DECL

Korean LFN's low negation interpretation as represented in (32) is just the same as the SFN (short form negation) as in (33b).

- (33) Korean SFN (short form negation)
 a. ??[imi an o-ass-e]?⁹⁾ 'Did he not come already?'
 already neg come past Q
 b. [acik an o-ass-e]? 'Did he not come yet?'
 already neg come past Q

For SFN, the RPs cannot be ambiguous, so it allows only one function, which is retaining or reversing the polarity of the antecedent, as already discussed for the examples (17-18). In other words, Korean low negation interpretation, either SFN as in (33) or the literal interpretation of the LFN as in (32), is always unambiguous. Hence, the ambiguity of RPs to LFN in Korean is different from the ambiguity of English low negation in (29). Korean ambiguity is only due to the two possible interpretations, pragmatic vs. literal interpretations, as in (31) and (32), respectively. When Korean LFN has the literal meaning as in (31), it only takes the outermost proposition just like SFN in (18), where only *d*, but not *d'*, is available as the antecedent of RPs.

9) This seems more acceptable in Kyungsang dialect than in standard style. In standard style, short form negation with *imi* 'already' is generally judged bad. This can only be interpreted as a question of 'whether his not-coming already took place', which is odd in a normal situation.

(18) [_{ActP} ASSERT[_{NegP} *Sumi-ka* an [_{TP} t_{Sumi} o-ss-e]]]
 $\hookrightarrow d_{prop}$ $\hookrightarrow d_{prop}^+$

But English high negation is doubly ambiguous. One case is due to the pragmatic/literal interpretations as in (27) and (28), respectively. And the other ambiguity occurs within the literal interpretation, which is due to two possible antecedents for the RPs in English as shown in (13) and (28'). When English high negation has the literal meaning as in (28), it can take the embedded inner positive propositions as well as the outer negative proposition as the antecedent just like English low negation in (12) and (29) does.

To sum up, the common property between Korean and English is that RPs are anaphors that refer back to the antecedent from the preceding utterances that they are responding to. But the difference between the anaphoric relations of the RPs to the antecedents of the two languages is that Korean negative questions always allow only one antecedent, regardless of whether it is the literal meaning of Korean LFN questions as (32) or SFN questions as in (33b), yielding non-ambiguous RPs. In contrast, English negative questions always allow *two* possible antecedents, regardless of whether it is the literal meaning of English 'high' negation question as in (28) or syntactically 'low negation' as in (1 and 2), (12) or (29), yielding ambiguity.

So far, we saw that ambiguity of Korean LFN is only due to the two possible interpretations, *i.e.* pragmatic vs. literal interpretations, and Korean RPs are anaphors that refer to only one antecedent from the preceding proposition, *i.e.* for the outermost NegP only, for both SFN and LFN. On the other hand, ambiguity of English *high* negation is two folds. One kind of ambiguity is due to the two possible interpretations of high negation, *i.e.* pragmatic vs. literal interpretations, just like Korean, and the other kind of ambiguity occurs within the literal meaning and it is due to availability of multiple antecedents just like English *low* negation.

5. Conclusion

In this study, we explored the ambiguity of Korean RPs responding to long form negation(LFN) in comparison to the ambiguity of English RPs. We showed that the ambiguity in Korean LFN is due to pragmatic/literal meaning alternatives, but not due to multiple antecedents from the preceding utterance, which is proposed

by Krika (2013) as the reason of ambiguity of English RPs. It is claimed that while Korean RPs are anaphors, supporting Krifka's (2013) propositional anaphoric approach to English RPs, they can refer to *only one* antecedent from the preceding utterance unlike English.

We argued that the reason why Korean short form negation(SFN) does not raise ambiguity is *not* because Korean SFN is a predicate negation as Krifka (2013) suggests, by observing that LFN *declarative* sentence, which clearly has a separate negative phrase, NegP, also does not allow double antecedents as in (18). This fact that not only SFN but also LFN *declaration* does not allow multiple propositional antecedents showed that Korean RPs can get access to only one antecedent, *i.e.* the outermost propositional antecedent, confirming that Korean RPs have the *semantic* truth conditional function only.

Furthermore, it is shown that even to a LFN *question*, which seemingly allow ambiguity and hence could be potentially analyzed as providing two possible antecedents under Krifka's analysis, Korean RPs always can take only one possible antecedent, *i.e.* the proposition from the outermost phrase NegP only, but not the inner proposition such as a positive proposition from TP. This is verified by observing that a question where LFN is guaranteed to be interpreted proposition-internally by co-presence of NPI *acik* 'yet' as in (32) is also always answered unambiguously by RT. By observing that LFN question with PPI *imi* 'already' has proposition-external interpretation as in (31), yielding the same reading as positive question, we could see that one reading of the ambiguity occurring for LFN is pragmatically-inferred positive meaning. Thus the ambiguity occurring for LFN *questions* is also not due to multiple antecedents, but because of pragmatic vs. literal interpretations.

In contrast, it is shown that ambiguity of English *high* negation is two folds. One kind of ambiguity is due to the two possible interpretations of high negation, *i.e.* pragmatic vs. literal interpretations as represented in (27') and (28'), just like Korean (31) and (32), and the other kind of ambiguity occurs within the literal meaning (28') of high negation and it is due to availability of multiple antecedents just like English *low* negation.

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