

Inadequacy: Implications of *-(n)un* in Korean

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Abstract

This paper investigates the implication that Korean NUN gives rise to, and in particular different contexts that it arise in. Previous discussion on whether the implication of NUN, widely accepted to mark contrastive topics, is conventional or conversational focuses on different kinds of implications that NUN gives rise to. I argue that this focus on different kinds of implications have led to different judgements with respect to detachability of cancellability of NUN in previous literature. In this paper, I propose that Korean NUN gives rise to two different types of implications: main inadequacy implication and three sub-implications (i.e. uncertainty, exhaustivity, and unwillingness implication). The main inadequacy implication is conventionally associated with NUN given that it is detachable and non-cancellable. The analysis of this inadequacy is implemented via an extension of alternative semantics for focus (Stechow 1981, Rooth 1985 cited in Büring 2016). I suggest that NUN makes use of both alternative questions and alternative propositions, which are close to what is described as F-alternatives and CT-alternatives. The three sub-implications arise in interaction with different contextual conditions, and contextual changes can easily give rise to different sub-implications. Moreover, I discuss that Korean NUN marking does not show the same distribution as English contrastive topic marking.

Keywords: conventional implicature, conversational implicature, contrastive topics, *-un/nun*, Korean, discourse

1. Introduction

This paper explores the implications associated with the use of NUN (i.e. NUN refers to *-nun* and *-un* which are allomorphs.) and how it varies with regard to different contexts NUN appears in. I will be mainly contrasting the implications that clauses marked with NUN give rise to with the ones without the marking. In this paper, I will focus specifically on the contrastive use of NUN.¹

In naturally spoken contexts, it can be easily observed that the arguments are not marked with any suffixes such as case markers, postpositions. As in (1), each argument (i.e. *na* ‘I’, *chumsim*

¹NUN has been argued to appear in several different contexts including contrastive contexts, thematic topics, and generic sentences. It is debatable as to whether thematic topics is marked with NUN without implying any contrastive meaning; however, it will not be discussed in this paper since it is beyond its scope.

‘lunch’, *cip* ‘house’) do not take *-i/ka* and *-ul/lul*² which are known to be a nominative and an accusative marker respectively.

- (1) *na cemsim mek-taka cip nawa-ss-e.*
 I-Ø lunch-Ø eat-CONJ house-Ø come.out-PST-DECL
 ‘I was eating lunch, then came out from my house.’ [elicited (modified)]

Compare example (1) to example (2), where the subject *lwummeyithu han myeng* ‘one roommate’ is marked with NUN. Speaker B’s answer implies that there is a possibility that roommates other than the one roommate under discussion did not pass the quiz. The more specific implications arise based on the different contexts regarding the speaker’s knowledge and willingness: (i) the speaker is not aware of the information about the other roommates; (ii) the speaker is aware of the information that the other roommates didn’t pass the exam; (iii) the speaker is aware of the information about the other roommates but is not willing to provide the information to the addressee.

- (2) A: How did the quiz go?
 B: *lwummeyithu han myeng-un hapkyekhay-ss-e.*
 roommate one person-NUN pass-PST-DECL
 ‘One roommate_B passed.’ [Lee 1999 (modified)]

Previously, NUN has been argued to mark contrastive topics (i.e. CT), and to give rise to either the implication where the speaker is uncertain about their information, i.e. uncertainty implication (Hara 2006, I. Kim 2018), or the implication where the speaker is aware that all the other alternative does not meet the current proposition, i.e. exhaustivity implication (Lee 2003, J. Kim 2018). Two main approaches have attempted to account for the implications: conventional implication (Hara 2006, Lee 2003, J. Kim 2018) and conversational implication (I. Kim 2018). The first approach argues that the implications that NUN gives rise to are conventional given that these inferences are detachable and non-cancellable. The other approach argues that the implications are conversational implication in that the implications are non-detachable and cancellable.

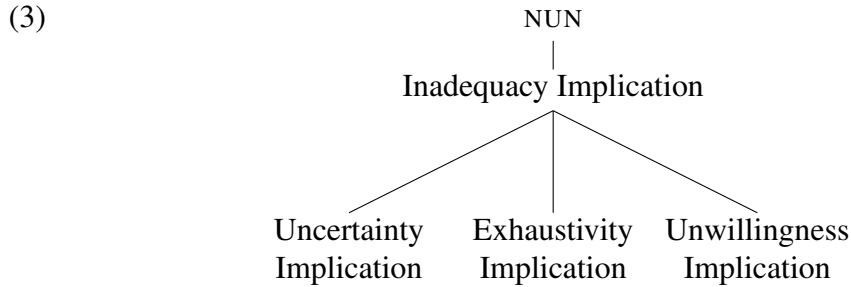
In this paper, I intend to show that the implications that arise in NUN-marked sentences should be understood in two different levels. I argue that the main implication that NUN gives rise to an inadequacy implication. Specifically, a NUN-marked sentence “x-NUN P” conveys that there are alternatives y to x such that the information that “y –P” is possibly relevant but is not being provided by the speaker at the context. The meaning of inadequacy will be discussed with respect to alternative questions and alternative propositions, following Büring (2016). The main inadequacy implication that NUN gives rise to shows a conventional-like properties where it is detachable and non-cancellable.

Moreover, I argue that different contexts give rise to three different sub-implications which all share the main inadequacy implication: uncertainty, exhaustivity, and unwillingness implication. I. Kim (2018) discusses various different implications of NUN including uncertainty and unwillingness, but the actual contexts that give rise to different implications have not been discussed in detail. Specifically, I will show that not all possible implications of NUN arise in every context; but each sub-implication depends on the assumptions about the speaker’s information state at the context. For instance in (2), if we assume that speaker B is the grader of the quiz and speaker A is

²Allomorphs *-i* and *-ka*, and *-ul* and *-lul* will be glossed as KA and LUL, respectively.

aware of this fact, the context rules out the possibility that speaker B would be uncertain about the results. Thus, it would imply that the other roommates did not pass the quiz but speaker B doesn't want to make it explicit (i.e. politeness effect), exhaustivity implication; it could also imply that the speaker is not willing to tell the information other than one roommate who passed the quiz, unwillingness implication. Note that in either case, speaker B uses NUN to imply that their answer gives inadequate information.

The different hierarchical level of the main implication and sub-implications is described in (3).



NUN mainly gives rise to inadequacy implication which is detachable to NUN and not cancellable (i.e. section 4.1). Three subtypes of implications (i.e. uncertainty, exhaustivity, and unwillingness) arise depending on the assumptions about speaker's knowledge at the context. These sub-implications are cancellable and certain contextual changes can give rise to different sub-implication. However, an important point to make here is that the contextual changes cannot cancel the main inadequacy implication that arises from NUN.

In section 2, I will introduce two approaches on the type of implications that NUN give rise to, which are conventional and conversational. In section 3, the nature of NUN regarding CT will be discussed. Section 4 will discuss about the main implication of inadequacy that NUN give rise to. Section 5 will show different subtypes of implications (i.e. uncertainty, exhaustivity, and unwillingness) of NUN and how they arise differently based on the context. In section 6, I will discuss about further implications of NUN including scalarity, specificity, and speaker subjectivity. Moreover, I will show what implications arise when NUN marks predicates and adverbs. Section 7 concludes.

2. Previous analyses

Two approaches have accounted for the implications that NUN gives rise to. One approach views that the implications are conventional implicature (Hara 2006, J. Kim 2018, Lee 2003). The other approach views that the implications are conversational implicature (I. Kim 2018, Lee 1999).

2.1. Conventional implicature

Hara (2006) proposes that *wa*-induced implicatures in Japanese are conventional following Gricean criteria (Grice 1975 cited in Hara 2006) on the difference between conventional and conversational implicatures. Hara argues that the analysis of *-wa* is also applicable to Korean NUN; NUN has been analyzed as a Korean counterpart of Japanese *-wa*. Specifically, Hara has shown the conventionality of *-wa* with respect to its detachability and non-cancellability. According to Hara, the use

of *-wa* conventionally implies that the speaker is uncertain about alternatives *y* to *-wa*-marked *x* (i.e. uncertainty implication). Similarly, Lee (2003) has argued that Korean NUN gives rise to conventional implicature, and not conversational implicature; the argument is mainly supported by the non-cancellability of NUN. According to Lee, the use of *-nun* conventionally implies that only NUN-marked *x* holds for property *P* (i.e. exhaustivity implication). This section presents Hara's argument that Korean NUN gives rise to conventional implicatures based on the evidence from Japanese *-wa*. I will show what has been argued about the detachability and non-cancellability of Japanese *-wa* (Hara 2006) and NUN (Lee 2003).

2.1.1 Detachability

Grice (1975), cited in Hara (2006), has argued that an implication can be analyzed to be conventional if it is detachable; in contrast, the implication is conversational if it is not detachable. The implicature of *-wa* is argued to be conventional since it seems to depend on the lexical item *-wa*. This is illustrated in (4).

- (4) A: Who came to the party?
- a. B: JOHN-*wa* *ki-ta*.
 John-TOP come-PST
 'As for John, he came.'
 ↪ Uncertainty implication: It is possible that it is not the case that John and Mary came. ≈ I don't know about others.
- b. B: JOHN-*ga* *ki-ta*.
 John-NOM come-PST
 'John came.'
 ↪ Complete answer (Hara 2006)

In example (4), the uncertainty implication only arises when the subject 'John' is marked with *-wa*. The answer where the subject is marked with *-ga* is understood to be a complete answer to the question 'Who came to the party?' The uncertainty implicature in (4a) is lost when the sentence is expressed with *-ga* in (4b). Note that both sentences marked with *-wa* and *-ga* have the same truth-conditions that 'John came.'

2.1.2 Non-cancellability

Grice (1975), cited in Hara (2006), has argued that implication can be analyzed to be conventional if it is non-cancellable; in contrast, the implication is conversational if it is cancellable. Lee (2003) argues that the implication of NUN is conventional since it seems to be non-cancellable. This is illustrated in (5).

- (5) A: Do you have money?
- a. B: *na tongceon-un iss-e*.
 I coins-CT have-DECL
 'I have coins_{CT}, (but not bills).'

- b. ?*.... *kuriko cicen-un/-to iss-e* .
 and bill-CT/-also have-DECL
 ‘...and I have bills_{CT} /also have bills.’ (Lee 2003)

Example (5a) implies that the speaker only have coins and does not have bills. A sentence such as ‘... and I have bills,’ as in (5b), cannot be felicitously added after (5a). The unacceptability of (5b) as a continuation to (5a) shows that the implication that NUN gives rise to in (5a) is not cancellable; thus it is conventional.

Therefore, given their detachability and non-cancellability, the conventional approach concludes that the implications that arise from NUN marking are conventional, and not conversational.

2.1.3 Conventional presupposition

J. Kim (2018) also argues for the conventionality of the implication that NUN gives rise to as in example (6).

- (6) A: Whom did they kiss?
 a. B: ANN-UN DAVE-HANTEY *kisshay-ss-e*.
 Ann-NUN Dave-to kiss-PST-DECL
 ‘ANN kissed DAVE.’
 b. #... NAMECI- YECATUL-TO DAVE-HANTEY *kisshay-ss-e*.
 rest women-also Dave-to kiss-PST-DECL
 ‘...THE REST OF THE WOMEN kissed DAVE, too.’ (J. Kim 2018)

As in (5), example (6) shows that example (6a) implies that the speaker knows that no one else other than Ann kissed Dave. A sentence such as ‘... the rest of the women kissed dave, too,’ as in (6b), cannot be felicitously added after (6a).

However, Kim argues that the conventionalized meaning of NUN is a presupposition and not an implicature. This is supported by the ‘Hey, wait a minute’ test following Shanon (1976) and von Stechow (2016), both cited in J. Kim (2018). ‘Hey, wait a minute’ test tests whether an implication can be questioned by a sentence starting with ‘Hey, wait a minute.’ It assumes that only a presupposition can be questioned by ‘Hey, wait a minute.’

- (7) Context: June is the only candidate for the president of Ulsan High School.
 a. A: JUNE-UN SAM BAN-EYSE *inki-ka* *manha*.
 June-NUN three class-in popularity-NOM much
 ‘JUNE is popular in CLASS 3.’
 ↪ Non-at-issue meaning: Someone other than June is popular in a class other than class 3.
 b. B: Hey, wait a minute! What do you mean by ‘JUNE-(N)UN’? Is there another candidate? (J. Kim 2018)

Example (7) shows that the implication, in (7a), which NUN gives rise to (i.e. ‘Someone other than June is popular in a class other than class 3.’) can be questioned by, for instance, the sentence in (7b); thus, the implication, which Kim refers to as ‘non-at-issue meaning,’ is a presupposition.

2.2. Conversational implicature

I. Kim (2018) argues that the implicature that arises from NUN is conversational rather than conventional. Contrary to the argument in previous subsection, the implication that NUN gives rise to is argued to be non-detachable and cancellable.

2.2.1 Non-detachability

I. Kim (2018) argues that the difference between example (8a) and (8b) is not due to the use of NUN. He argues that NUN does not inherently have the meaning of uncertainty, but it is rather the case that the uncertainty implication arises from a certain context³.

- (8) A: Which fruit did John eat at the party?
- a. B: (*John-i*) *sakwa-nun mek-ess-e*.
John-NOM apple-TOP eat-PST-DECL
'John ate an apple.'
→ Uncertainty implication: 'But I don't know whether he ate other fruits.'
- b. B: (*John-i*) *sakwa mek-ess-e*.
John-NOM apple eat-PST-DECL
'John ate an apple.'
⇒ Uncertainty implication does not arise.

2.2.2 Cancellability

In example (9), I. Kim (2018) argues that the uncertainty implicature can be cancelled by changing the context; example (9a) implies that the speaker does not have any information about the others. We can assume that in fact the speaker knows about the others, but they are not willing to give out the information to the addressee. This is shown in (9b).

- (9) A: Who came to the party?
- a. B: JOHN-*wa* *ki-ta*.
John-TOP come-PST
'As for John, he came.'
→ Uncertainty implication: It is possible that it is not the case that John and Mary came. ≈ I don't know about others.
- b. ... but I do not imply to mean that I don't know whether Mary came. I just don't want to let you know whether she came or not.

Therefore, given their non-detachability and cancellability, the conversational approach concludes that the implications that arise from NUN is conversational, and not conventional.

³The details of this discussion have not been provided in I. Kim (2018)

2.3. Discussion on the implicature of NUN

As shown above, the discussion on whether the implication of NUN is conventional or conversational focuses on different kinds of implications that NUN gives rise to. This focus on different kinds of implications seems to have led to having different judgements regarding detachability and cancellability of NUN in previous literature. This difference in inferences and analyses is illustrated in table (10).

		Hara (2006)	Lee (2003)	J. Kim (2018)	I. Kim (2018)
(10)	Inferences	Uncertainty implication	Exhaustivity implication	Exhaustivity implication	Uncertainty implication
	Analyses	Conventional implicature	Conventional implicature	Conventional presupposition	Conversational implicature

In this subsection, I intend to explain different kinds of implications and to show how previous judgements themselves are valid. I argue that it is important to separate the main implication that arises from the use of NUN (i.e. implication that NUN is conventionally associated with) and the sub-implications that arise in interaction with different contextual conditions. Thus, I argue that separating the two types of implications might be helpful in understanding the actual implication of NUN.

2.3.1 Conventional or conversational?

Previously, there have been two contradicting judgements as to whether the implications of NUN are conventional or conversational. The implication that a sentence marked with NUN gives rise to, has been argued to be both cancellable and non-cancellable at the same time. In this subsection, I will show that two contrasting arguments are both true; it is in fact the case that the arguments on cancellability are testing the different types of implications of NUN.

Prior to the discussion, it should be noted that the discussion here on the conventionality and the conversationality will focus on the cancellability of the implications of NUN. As for detachability, the detailed argument as to whether the implication of NUN is detachable has not been sufficiently provided by I. Kim (2018). I argue that example (11) clearly shows that NUN is detachable.

- (11) Context: Speaker B is aware that multiple people came to the party, and they are willing to be cooperative in the conversation.
- A: Who came to the party?
- a. B: *John-un wa-ss-e.*
 John-NUN come-PST-DECL
 ‘JOHN_{CT} came.’
 ↷ Uncertainty implication: Speaker B does not have any information on the others who attended the party.
- b. B: *John wa-ss-e.*
 John come-PST-DECL
 ‘John came.’
 ⇒ There are no implications.

As in (11), the uncertainty implication only arises when the subject NP ‘John’ is marked with NUN. The uncertainty implication is lost when the subject ‘John’ is unmarked; no implications in addition to the meaning of the sentence ‘John came.’ Note that there are no contextual differences between example (11a) and (11b). Thus, there is no strong evidence to argue that the implications of NUN only arises from the context, and not from the use of NUN.

If we assume that speaker B in (11b) in fact is uncertain about the others who came to the party, the addressee, speaker A, would receive a false implication that speaker B might have further information to give about the attendees. It is also possible that speaker B intends to give the false implication that they have further information about the other attendees by intentionally leaving out NUN on the subject ‘John.’ This can be seen in (12).

(12) Context: (= (11))

A: Who came to the party?

a. B: (11a)

?? A: And who else came?

b. B: (11b)

✓ A: And who else came?

As in (12), it is natural to ask a follow-up question ‘And who else came?’ to (11b) (i.e. (12b)) whereas it is unnatural to ask such question to (11a) (i.e. (12a)); the information about attendees other than ‘John’ is implied in (11a) whereas it is not in (11b).

As mentioned above, two seemingly contradicting judgements on the cancellability of the implication of NUN are both valid. Two different judgements are cancelling two different types of implications: the main inadequacy implication and the uncertainty implication, a sub-implication. As in (13), the main inadequacy implication is not cancellable whereas the uncertainty implication is cancellable. Example (13) is modified from (5a) (i.e. non-cancellability) and example (9a) (i.e. cancellability).

(13) Context (= (11)): Speaker B is aware that multiple people came to the party, and they are willing to be cooperative in the conversation.

A: Who came to the party?

B: *John-un wa-ess-e.*

John-NUN come-PST-DECL

‘JOHN_{CT} came.’

↪ (main) Inadequacy implication: There is information that will not be shared about other attendees, and only information about who attended the party is ‘John.’

↪ (sub) Uncertainty implication: Speaker does not have any information on the others who attended the party.

a. # ... and also Mary came.

⇒ The inadequacy implication cannot be cancelled.

b. (speaker changes their mind to be cooperative to the conversation)

✓ ... In fact, I know who came to the party. But I am not going to tell you.

⇒ The uncertainty implication can be cancelled. Then, the unwillingness implication arises.

The non-cancellability of the main implication is in fact also addressed in I. Kim (2018). Kim mentions that the sentence marked with NUN cannot be or hardly be followed by a sentence like ‘but it is not the case that I don’t know if Mary came or but I do not mean to imply that I don’t know whether Mary came.’ I argue that it is in fact impossible to add a sentence which contradicts with the main inadequacy implication; this is illustrated in example (13a) above.

It has been debated whether the core implication that NUN gives rise is uncertainty or exhaustivity. Some researchers have argued that NUN gives rise to uncertainty implication (Hara 2006, I. Kim 2018), as in (14a), and others have argued that NUN gives rise to exhaustivity implication (Lee 2003, J. Kim 2018), as in (14b).

- However, in either case, no contexts are provided; and thus it is hard to conclude that NUN gives rise to uncertainty implication in (14a) and exhaustivity implication in (14b). We can easily get the different implication by assuming different contexts. For instance, we can assume a context in (14a) that the speaker is actually the grader of the exam and evidently knows about the test results; at such a context, the uncertainty implication would not arise. The same sentence marked with NUN gives rise to the exhaustivity implication that students other than Mary did not pass the exam. As for (14b), we can assume that the speaker only has information about Ann and no one else; the exhaustivity implication would not arise. The same sentence marked with NUN gives rise to the uncertainty implication that the speaker does not know whether other people kissed Dave or not.

(15) A: Who came to the party?

B: JOHN-*wa* *ki-ta*.

John-TOP come-PST

‘As for John, he came.’

→ Uncertainty implication: It is possible that it is not the case that John and Mary came. ≈
I don’t know about others. (I. Kim 2018)

Kim has noticed that the uncertainty implication in (15) can be cancelled by a sentence like ‘but I do not imply to mean that I don’t know whether Mary came. I just don’t want to let you know whether she came or not.’ This is possible when we change the state of the speaker’s knowledge about the context.

Kim argues that, given that the implication is cancellable, the implication that NUN gives rise to is conversational. But, again, as in (16), it is important to note that the inadequacy implication is detachable and cannot be cancelled.

- (16) a. (example (14a)) ...# and also John passed the exam.
b. (example (14b)) ...# and also David kissed Dave.
c. (example (15)) ...# and also Mary came to the party.

Moreover, it has not been discussed in detail which contexts give rise to which implication for NUN. In section 5, I will discuss about the various contexts where the use of NUN gives rise to different sub-implications (i.e. uncertainty, exhaustivity, and unwillingness). My proposal on two different kinds of implications (i.e. main inadequacy and three sub-implications) will be discussed in section 4.

3. Does NUN mark CT?

This section discusses on whether NUN marks CT as it was previously argued in the literature (Hara 2006, Lee 2003, J. Kim 2018, I. Kim 2018). It is true that the marking of NUN overlaps a great deal with where CT can appear. However, in this section, I will show that Korean NUN marking and English contrastive topic marking do not have the same distribution. It seems that there are CT inducing contexts which do not get marked with NUN. It also seems that there are NUN-marked contexts that do not fall under CT. It is important to note that the marking of NUN in these latter contexts is not optional; its absence leads to infelicity.

3.1. CT-like properties

In this subsection, I intend to show the similarity between NUN-marked contexts and CT inducing contexts, following Büring (2016). It will show how NUN appears in a context where CT appears regarding partial topics, and shifting topics; it will show how NUN does not appear in a context where CT does not appear regarding double correction and complete answer.

3.1.1 Partial topics

CT appears when a partial answer is given for multiple *wh*-questions (e.g. example (17a)) or single *wh*-question including plurals (e.g. example (17b)). Similarly, partial topics seem to be marked with NUN in Korean. This is illustrated in example (17).

- (17) a. (A: Which guest brought what?)
 B: FRED-**nun** *khong kacye-wa-ss-e*.
 Fred-NUN bean bring-come-PST-DECL
 ‘FRED_{CT} brought the BEANS_F.’
- b. (A: Where do your siblings live?)
 B: *wuli enni-nun suthokhollom-e sal-a*.
 our sister-NUN Stockholm-LOC live-DECL
 ‘My SISTER_{CT} lives in STOCKHOLM_F.’

In example (17a), a partial answer about ‘Fred’ is given to the question about the whole set of the guests. In example (17b), a partial answer about ‘my sister’ is given to the question about the whole set of the siblings. In both cases, ‘Fred’ and ‘my sister’ are obligatorily marked with NUN; and providing partial topics without NUN is infelicitous.

The partial topic marking of CT includes the case of multiple different answers that could lead up to a complete answer, as in (18).

- (18) (A: Who did what?)
 B: JOE-**nun** *ca-ko* SUE-**nun** *nol-ass-ta*.
 Joe-CT sleep-and Sue-CT play-PST-DECL
 ‘JOE_{CT} slept and SUE_{CT} played.’ (Büiring 2016)

This construction has been analyzed separately from partial topics as ‘list topic construction’ in Korean (I. Kim 2018); but in this paper I will follow Büiring’s analysis that analyzes the construction as partial topics. As in the example (18), I argue that NUN only scopes over the clause ‘Joe slept’ and the clause ‘Sue played’ separately, and not the entire answer conjoining two clauses. Thus, each sentence of ‘Joe slept’ and ‘Sue played’ can be understood to be a partial answer to the question ‘Who did what?’. Again, it is infelicitous if either ‘Joe’ or ‘Sue’ lacks NUN marking.

3.1.2 Shifting topics

CT marking may also be used to mark shifting topics, as in example (19). Similarly, Korean NUN seems to mark shifting topics. This is illustrated in example (19); the examples are translations from examples from Büiring (2016).

- (19) a. (A: Will Bo come to school today?)
 B: *ecey-nun kyay apha-ss-e*.
 yesterday-NUN s/he sick-PST-DECL
 ‘YESTERDAY_{CT} he was SICK_F.’
- b. (A: Where did Fritz buy this book?)
 B: *Bertie-nun Hartlieb-ese sa-ss-e*.
 Bertie-NUN Harlieb-LOC buy-PST-DECL
 ‘BERTIE_{CT} bought it at HARTLIEB_F’s.’

In example (19a), a shifted topic ‘yesterday’ is given to the question about ‘today’. In example (19b), a shifted topic ‘Bertie’ is given to the question about ‘Fritz’. In both cases, ‘yesterday’ and ‘Bertie’ are obligatorily marked with NUN; and providing shifting topics without NUN is infelicitous.

3.1.3 Infelicitous context: double correction

The marking of CT is not allowed when two sets of information is corrected. Similarly, the context of double correction does not seem to be marked with NUN in Korean. This is illustrated in (20).

(20) (A: What games are on tonight? Is Brazil playing England?)

B: *ani supheyin-i/#-un tokil-ilang kyengki-ha-y.*
no Spain-KA/-NUN Germany-with game-do-DECL
'No, SPAIN_F/#_{CT} is playing GERMANY_F.'

In example (20), two sets of information is corrected. 'Brazil' is corrected to 'Spain', and 'England' is corrected to 'Germany'. It is infelicitous to have CT marking on 'Spain'; it is also infelicitous to mark 'Spain' with NUN. In Korean, 'Spain' gets obligatory KA marking⁴.

3.1.4 Infelicitous context: complete/last answer

CT does not also mark complete answers (i.e. 'last answer' in Büring (2016)). Similarly, Korean NUN does not seem to mark complete answers. This is illustrated in (21).

(21) (A: Where are these two from?)

B: *twul ta(#-nun) hengkali-eyse wa-ss-e.*
two all-NUN Hungary-from come-PST-DECL
'BOTH OF THEM(#_{CT}) are from HUNGARY_F.'

In example (21), a complete answer about 'both of them' is given to the question about 'these two'; 'both of them' and 'these two' refer to the same set of entities. It is infelicitous to have CT marking on 'both of them'; it is also infelicitous to mark 'both of them' with NUN.

However, Büring (2016) has shown that CT can mark 'purely implicational topics', as in (22).

(22) (A: Where was the gardener at the time of the murder?)

B: *cengwensa-nun cip-ey iss-ess-eyo.*
gardener-NUN house-LOC exist-PST-DECL
'The GARDENER_{CT} was in the HOUSE_F.'

In (22), speaker B's answer about 'gardener' is a complete answer to the question about 'the gardener'. Nonetheless, it is possible for 'the gardener' to get a CT marking; the sentence then implies that there is someone else who was not in the house at the time of murder. It is argued that the context opens up the possibility of a larger question 'Who is the murderer', and it is possible for the speaker to provide an answer for this larger question. As in (22), same pattern of marking is observed with NUN in Korean.

3.2. Non-CT-like properties

In this subsection, I show the difference between the distribution of NUN-marking and CT-marking. My understanding of CT-inducing contexts follows Büring (2016). My goal is to show how NUN cannot mark the context having distinct foci even when it is resolved with an additive; it will also show that NUN can mark the context with double focus.

⁴There seems to have some interesting pattern as to where an argument gets no marking and where it gets KA marking. However, it will not be discussed in this paper.

3.2.1 Not all CTs are marked with NUN

CT has been argued not to be allowed in contexts where there is no distinctness in foci, as in (23).

(23) (A: Where are you guys from?)

- a. B: JACQUES_{CT} is from PARIS_F, # and COLETTE_{CT} is from PARIS_F.
- b. B: JACQUES_{CT} is from PARIS_F, and COLETTE_{CT} is from Paris, TOO_F.

In (23a), the proposition of ‘Jacques’ and the proposition of ‘Colette’ are identical (i.e. ‘being from Paris’). The infelicity of the CT marking in the second clause ‘Colette is from Paris’ is analyzed to be due to Gricean Maxims of manner; there are no reasons for the speaker to say the same proposition separately rather than stating ‘Jacques and Colette are from Paris.’ Nonetheless, this infelicity can be resolved with the use of focused ‘too,’ as in (23b).

Similar to (23a), Korean NUN cannot also appear in the second clause which shares the same proposition with the first clause (i.e. ‘being from Seoul’); see (24a). However, NUN patterns differently from CT in that the infelicity in (24a) cannot be resolved by the use of *-to* ‘also,’ as in (24b). It is important to note that NUN and additive *-to* cannot occur together in Korean.

(24) (A: Where are you guys from?)

- a. B: *swuci-nun sewul-eyse wa-ss-ko*, # *sala-nun sewul-eyse wa-ss-e*.
Suji-NUN Seoul-from come-PST-and Sarah-NUN Seoul-from come-PST-DECL
‘SUJI is from SEOUL, and SARAH is from SEOUL.’
- b. B: *swuci-nun sewul-eyse wa-ss-ko*, # *sala-to sewul-eyse wa-ss-e*.
Suji-NUN Seoul-from come-PST-and Sarah-also Seoul-from come-PST-DECL
‘SUJI is from SEOUL, and SARAH is from Seoul, TOO.’

Thus, it seems that NUN requires a strict contrastiveness in propositions than CT. NUN seems to require that the only entity that has the relevant property (e.g. ‘being from Seoul’) is what it marks in the context (e.g. ‘Suji’); a proposition that conveys that some other entity (e.g. ‘Sarah’) also has the same property (e.g. ‘being from Seoul’) cannot be added in the context even if the overt use of an additive *-to* ‘also.’

3.2.2 NUN marks more than CTs

Double focus construction has been argued to differ from CT-F construction in that two constructions assume different question under discussion, as in (25).

(25) a. A: Do you want to kick her out?

B: SHE_F wants to kick ME_F out.

b. A: Who do they want to kick out?

B: SHE_{CT} wants to kick ME_F out.

(Büring 2016)

Example (25a) and example (25b) have same meaning that ‘she wants to kick me out,’ but have different focus markings. The different implications are represented in the different contexts that they are used. Example (25a) is compatible as an answer to the question ‘Do you want to kick her out?’ whereas example (25b) is compatible as an answer to the question ‘Who do they want to kick out?’

In Korean, double focus construction gets both markings with or without NUN, as in (26).

(26) A: Do you want to kick her out?

a. B: *kyay-ka na nayccoch-ko siphe-ha-y.*
s/he-KA I kick.out-COMP want-do-DECL

‘SHE_F wants to kick ME_F out.’

b. B: *kyay-nun na nayccoch-ko siphe-ha-y.*
s/he-NUN I kick.out-COMP want-do-DECL

‘She wants to kick me out.’

→ Exhaustivity implication: It is only her that wants to kick someone out. The speaker doesn’t want to kick her out.

⇒ Uncertainty implication does not arise since the speaker should be aware of her own intentions of kicking someone out. Thus, politeness effect arises.

Example (26a) and example (26b) differ in that the use of NUN in (26b) gives rise to an additional implication. In this specific context, the exhaustivity implication that the only person who wants to kick ‘me’ out is ‘her’. The uncertainty implication does not arise since it is natural to assume that the speaker is aware of her own intentions of kicking someone out. Moreover, in (26b), a politeness effect arises. Detailed discussion on the politeness effect will be introduced in section 5.

3.3. Interim summary

This section has shown that Korean NUN marking does not have the same distribution with English contrastive topic marking. There are similarities between NUN-marked contexts and CT inducing contexts; nonetheless, clear differences between their distribution are observed. Thus, I argue that NUN-marked contexts cannot be analyzed with respect to previous approach on CT. The next two sections will propose a analysis to the meaning of inadequacy that NUN gives rise to, and discuss which specific context gives rise to each sub-implication.

4. Proposal: implications of NUN

This section aims to show the main implication that NUN gives rise to, which in this paper is referred to as inadequacy implication. By the inadequacy implication, I mean that the use of NUN implies that the information that the speaker is providing is in some way incomplete (i.e. section 4.1). This inadequacy can be specified in three ways depending on the context: uncertainty, exhaustivity, and unwillingness (i.e. section 4.2). And when the context is underspecified, it is in principle possible for all sub-implications to arise. More detailed discussion will follow below.

4.1. Main implication: inadequacy

The main implication which I call ‘inadequacy implication’ seems to give rise to a concrete idea of inadequacy; it would be infelicitous if the following sentence in the context contradicts with the implication.

The use of NUN shows different strategies of answering to the question comparing to unmarked NP and the use of an exclusive. (27a) contains unmarked NP which is a conjoined NP ‘Suji and Sarah’. In (27b) we have the exclusive while in (27c) we have Nun marking. (27a) provides the

information about Suji and Sarah without implying any other information about the others. (27b) provides information that Suji and Sarah are the exhaustive list of the ones who voted for X. (27c) provides information that the given information is inadequate and there are more information in the context which the speaker will not provide.

(27) Context: Multiple people are expected to vote either for X, Y, or Z. Speaker A does not know how many people voted for each candidate.

A: Who voted for X?

a. B: *swuci-lang sala X ppop-ass-e*.

Suji-and Sarah X vote.for-PST-DECL

‘Suji and Sarah voted for X. (✓ And Ina also voted for X.)’

b. B: *swuci-lang sala-man X ppop-ass-e*.

Suji-and Sarah-only X vote.for-PST-DECL

‘Only Suji and Sarah voted for X.’ (# And Ina also voted for X.)

→ Complete answer.

c. B: *swuci-lang sala-nun X ppop-ass-e*.

Suji-and Sarah-NUN X vote.for-PST-DECL

‘Suji and Sarah voted for X.’ (# And Ina also voted for X.)

→ (main) Inadequacy implication: There is information that will not be shared about other possible voters, and information that is only currently accessible on who voted for X is ‘Suji and Sarah.’

The bare marking differs from marking with the exclusive and Nun in that it allows the speaker to add the new entity that holds true for the proposition of ‘voting for X.’ The difference between the exclusive and Nun marking is that Nun marking opens up more possibility about the information on the others. Speaker actively use this strategy to give rise to implication that there is the possibility of other alternatives who vote for X that will not be provided by speaker B.

What does NUN actually mark? What exactly does this inadequacy mean? The basic idea can be implemented via an extension of alternative semantics for focus (Stechow 1981, Rooth 1985 cited in Büring 2016). Büring argues that focus ‘relates a declarative sentence to alternative propositions’ (e.g. ‘she wants to kick x out’) whereas CT ‘relates it to alternative questions’ (e.g. ‘Who does y want to kick out?’), as in (28).

(28) ‘SHE_{CT} wants to kick ME_F out.’

a. F-Alternatives: the set of propositions like ‘she wants to kick x out’, for some individual x

b. Ct-Alternatives: the set of questions meanings like ‘Who does y want to kick out?’, for some individual y (Büring 2016)

I argue that Nun makes use of both close to what is described as F-alternatives and CT-alternatives; thus, it differs from CT as discussed in section 3. This is illustrated in (29). Alternative propositions are bound to alternative questions in that an alternative proposition holds true for the entity y from an alternative question.

(29) *kyay-nun na nayccoch-ka siphe-ha-y*.

s/he-NUN I kick.out-COMP want-do-DECL

‘SHE_{CT} wants to kick ME_F out.’

- a. Alternative questions: ‘Who does y want to kick out?’, e.g. ‘Who does George/Mary/Bob/... want to kick out?’
- b. Alternative propositions: ‘y wants to kick x out,’ e.g. ‘y wants to kick George/Mary/Bob/... out.’; or, ‘y does not want to kick me out.’

Example (30) describes how the analysis in (29) accounts for the inadequacy implication that NUN gives rise to.

(30) (= (29))

↷ Implication: There is a possibility of an alternative y who holds for an alternative proposition, ‘y wants to kick x out’ or ‘y does not want to kick me out’.

- a. ... ✓ and George wants to kick Mary out.
- b. ... ✓ and George doesn’t want to kick me out.
- c. ... # and she (also) wants to kick Mary out. (rule out by (29a))
- d. ... # and George wants to kick me out, (too). (rule out by (29b))

As in (30a), NUN-marked sentence in (29) can be followed by a sentence ‘George wants to kick Mary out’ since it makes use of both an alternative question and an alternative proposition. This is also true for (30b) where (29) is followed by ‘George doesn’t want to kick me out.’ Example (30c) is infelicitous since there are no related alternative questions to ‘Who does she want to kick out?’ It cannot even be resolved from the possible violation of Maxim of Quantity by using ‘also’. Example (30d) is infelicitous since there are no related alternative propositions to ‘George wants to kick me out.’ It cannot even be resolved from the possible violation of Maxim of Quantity by using ‘too’.

Note that this inadequacy implication is conventional given that it is non-cancellable, as in (31).

(31) (= (29))

- a. ... # and she was the only one and I have nothing to say about the others (including me). (= (30c))
- b. ... # and there is someone else who wants to kick me out. (= (30d))

4.2. Sub-implications and context

Three types of sub-implications seem to arise from the use of NUN; all sub-implications would share the same main inadequacy implication which is repeated in (32). The context in (32) is not specific enough to give rise to one particular sub-implication. The context is compatible with either uncertainty, exhaustivity, or unwillingness implication; but it is important to note that it is not compatible with all three implications at the same time.

(32) Context: Multiple people are expected to vote either for X, Y, or Z. Speaker A does not know how many people voted for each candidate. (= (27c))

A: Who voted for X?

B: *swuci-lang sala-nun X ppop-ass-e.*

Suji-and Sarah-NUN X vote.for-PST-DECL

‘Suji and Sarah voted for X.’

→ (main) Inadequacy implication: There is information that will not be shared about other possible voters, and information that is only currently accessible on who voted for X is ‘Suji and Sarah.’

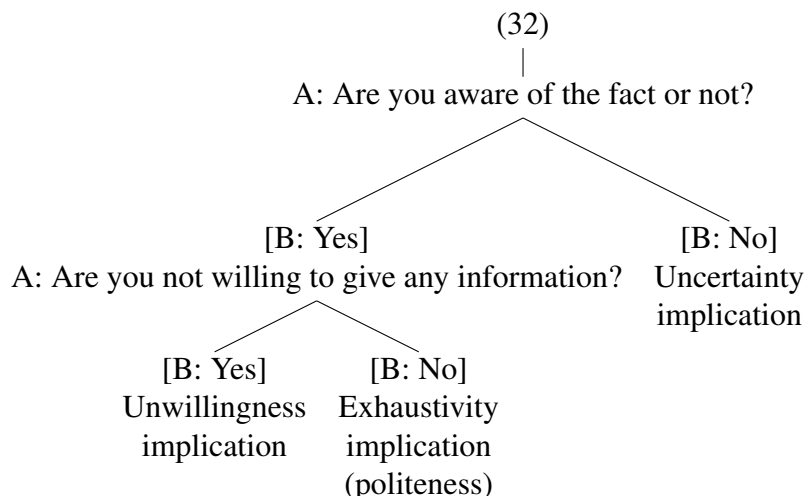
The particular context filters out other two implications and gives rise to a single implication. (33) illustrates the possible contexts that would each give rise to either uncertainty, exhaustivity, or unwillingness implication. The context relies highly on the degree of speaker’s knowledge on the context; but it also relies on politeness and willingness to be cooperative to the conversation.

- (33) There is further information that will not be shared (i.e. the main inadequacy implication in (32)) because...
- a. Context: Speaker B only has information about ‘Suji and Sarah’ and no one else.
There is a possibility that someone else other than ‘Suji and Sarah’ voted for X.
→ Uncertainty implication: Speaker B does not know which candidate did others vote for.
 - b. Context: Speaker B has full information on the voters, and it is true that ‘Suji and Sarah’ are the only ones who voted for X. However, speaker B intends to indirectly convey this information due to politeness.
→ Exhaustivity implication: The others did not vote for X. \approx The others voted for Y or Z, or The others did not vote at all.
⇒ Politeness: Speaker A might be personally related to candidate X, and speaker B might have found it inappropriate to tell speaker A about voters who did not vote for X.
 - c. Context: Speaker B has full information on the voters, but they are not willing to be cooperative. There is a possibility that someone else other than ‘Sarah and Suji’ voted for X.
→ Unwillingness implication: Speaker B is not willing to share the information about the other voters.

Note that each sub-implication is cancellable and different context can easily give rise to another implication. Nonetheless the main inadequacy implication is not cancellable even when the context changes. See example (13) on the cancellability of main implication and sub-implications.

As shown above, speakers are aware of the specific implication that NUN gives rise to (i.e. main inadequacy implication), and actively use NUN in relation to certain contexts in order to give rise to sub-implications. However, in some cases, the context gets ambiguous. In this case, it is possible that the speaker intentionally keep the context ambiguous. Speakers can leave the possible sub-implications unresolved. The addressee does not need to resolve the ambiguity between sub-implications; but they can ask further questions to disambiguate the information that the speaker is intending not to provide, as in (34).

(34)



4.3. More markings: object and prepositional phrases

NUN appears to not only mark subjects but also mark objects and prepositional phrases. Similar to subject marking, the use of NUN gives rise to the main inadequacy implication, and one of three sub-implications would arise depending on the context. Note that it is not the case that all three sub-implications arise at the same time. In (35), NUN marks the object *phasutha* ‘pasta,’ and, in (36), NUN marks the locative phrase *sewul-ey* ‘to Seoul.’

(35) Context: There are three options for dinner, which are pasta, pizza and burger.

A: ‘What does Suji like?’

B: *swuci phasutha-nun mek-e.*

Suji pasta-NUN eat-DECL

‘Suji eats pasta.’

→ (main) Inadequacy implication: There is information that will not be shared about the other possible food that Suji eats. Information that is only currently accessible on what Suji eats is ‘pasta.’

→ (sub) Uncertainty implication: Speaker B does not know whether Suji also eats pizza or burger.

→ (sub) Exhaustivity implication, with politeness: Suji does not eat food other than pasta.
≈ Suji does not eat pizza nor burger.

→ (sub) Unwillingness implication: Speaker B is not willing to share the information about other food that Suji eats.

(36) Context: Speakers are talking about some of big cities in Korea, which are Seoul, Busan, and Daegu.

A: Which cities have Suji been to?

B: *swuci sewul-ey-nun kapw-ass-e.*

Suji Seoul-LOC-NUN visit-PST-DECL

‘Suji has been to Seoul.’

→ (main) Inadequacy implication: There is information that will not be shared about the other possible places that Suji has been to. Information that is only currently accessible on where Suji has been is ‘Seoul.’

- ↪ (sub) Uncertainty implication: Speaker B does not know whether Suji has also been to Busan or Daegu.
- ↪ (sub) Exhaustivity implication, with politeness: Suji has not been to cities other than Seoul. ≈ Suji has not been to Busan nor Daegu.
- ↪ (sub) Unwillingness implication: Speaker B is not willing to share the information about other cities that Suji has been to.

5. Contextual variance and sub-implications

This section discusses as to which specific context gives rise to each sub-implication. I will show that (i) uncertainty implication arises when exhaustivity implication is blocked (i.e. section 5.1), (ii) exhaustivity implication arises when uncertainty implication is blocked (i.e. section 5.2), and (iii) unwillingness implication arises when both exhaustivity and uncertainty implications are blocked (i.e. section 5.3). Moreover, I will show how contexts can be subject to speaker subjectivity, and they give rise to different implications (i.e. section 5.4).

5.1. When exhaustivity implication is blocked

Uncertainty and exhaustivity implication seem to become salient when each other is blocked in the context. Uncertainty implication becomes salient when the context blocks exhaustivity implication, as in (37).

- (37) a. Context: Multiple people are expect to bring multiple kinds of food to a pochluck.
 A: Who brought wine?
 B: *swuci-lang sala-nun wain kacye-wa-ss-e*.
 Suji-and Sarah-NUN wine bring-come-PST-DECL
 ‘Suji and Sarah brought wine.’
 ↪ (main) Inadequacy implication: There is information that will not be shared about the other possible guests. Information that is only currently accessible on who brought wine is ‘Suji and Sarah.’
 ⇒ Context does not disambiguate between sub-implications.
- b. Context update: Speakers can see four bottles of wine on the table. Speakers assume there are four and only four people who brought wine.
 ↪ Uncertainty implication: Speaker B does not know two remaining people who brought wine.
 ⇒ Context filters out the exhaustivity implication. The implication that ‘Guests other than Suji and Sarah did not bring wine.’ does not arise; the context provides information that there are two additional people who brought wine.

Context in (37a) gives rise to the main inadequacy implication that, as far as speaker B can say, Suji and Sarah are the only guests who brought wine. Nonetheless, the context is underspecified and does not provide further information that would disambiguate between three sub-implications. An updated context in (37b) filters out the exhaustivity implication and makes uncertainty implication salient. The context gives a precise information about the number of guests who brought wine; thus the implication that there are no other guests who brought wine (i.e. exhaustivity implication) does

not arise from the context. It is possible to assume that the unwillingness implication also arises from the context. However, it seems that contexts prefer uncertainty implication to unwillingness implication when both implications survive from the context. I argue that this preference is because speakers expect the others to be cooperative as possible in conversations.

Exhaustivity implications can also be blocked when the context assumes a common knowledge, as in (38).

(38) Context: Speakers are talking about where Sarah went after school.

A: Where is Sarah?

a. B: *sala cip-ey-nun iss-e.*

Sarah house-LOC-NUN exist-DECL

‘Sarah is at home.’

↷ Uncertainty implication: Speaker B does not know where Sarah’s specific location is in the house.

⇒ Exhaustivity implication is filtered out by a common knowledge; a person cannot be in two different places at the same time. The implication that ‘Sarah is not at the place where it is not home.’ does not arise.

b. B: ... # and I can see her at the front door.

Context in (38) includes a common knowledge that a person cannot exist in two different places at the same time. Thus, it is redundant to mark with NUN to give rise to an exhaustivity implication that ‘Sarah is not at the place where it is not home.’ The same sentence (i.e. (38a)) without NUN itself gives rise to an exhaustivity implication. Similarly, the uncertainty implication that arises is not that speaker B does not know where else Sarah exists. The common knowledge rather gives rise to the implication about the specific location in the house; speaker B is only aware that Sarah is in the house, and does not have further specific information as to where Sarah is in the house. As in (38b), the sentence that specifies Sarah’s location in the house cannot follow speaker B’s answer in (38a).

5.2. When uncertainty implication is blocked

Similarly to section 5.1, exhaustivity implication becomes salient when the context blocks uncertainty implication, as in (39).

(39) Context: There are three options for dinner, which are pasta, pizza and burger.

a. A: What does Sarah like?

B: *sala phasutha-nun mek-e.*

Sarah pasta-NUN eat-DECL

‘Sarah eats pasta.’

↷ (main) Inadequacy implication: There is information that will not be shared about other possible food that Sarah eats. Information that is only currently accessible on what Sarah eats is ‘pasta.’

⇒ Context does not disambiguate between sub-implications.

b. A: What do you like?

B: *na phasutha-nun mek-e.*

I pasta-NUN eat-DECL

‘I eat pasta.’

↪ Exhaustivity implication: Speaker B does not eat food other than pasta. ≈ Speaker B does not eat pizza nor burger.

⇒ Context filters out the uncertainty implication. The implication that ‘Speaker B does not know whether speaker B also eats pizza or burger.’ does not arise; the context provides information that the speaker should have all information about themselves.

Context in (39a) gives rise to the main inadequacy implication that, as far as speaker B can say, pasta is the only good that Sarah eats. Nonetheless, the context is underspecified and does not provide further information that would disambiguate between three sub-implications. A different context in (39b) filters out the uncertainty implication and makes exhaustivity implication salient. The contexts assume the speaker to be aware of their information; thus the implication that the speaker is uncertain about whether they eat other food (i.e. uncertainty implication) does not arise from the context. Similarly, the context seems to prefer exhaustivity implication to unwillingness implication when both implications survive from the context. I argue that this preference is also due to speakers’ expectation on cooperativity.

The use of exclusive *-man* ‘only’ and the exhaustive use of NUN do not seem to have any significant distinction; compare (39b) and (40).

(40) B: *na phasutha-man mek-e.*

I pasta-only eat-DECL

‘I only eat pasta.’

↪ Exhaustivity implication: Speaker B does not eat food other than pasta. ≈ Speaker B does not eat pizza nor burger.

Exclusive *-man* and NUN similarly give rise to the exhaustivity implication that speaker B does not eat food other than pasta. The only difference that native speakers seem to feel between two examples is that of politeness. The speaker would use an active strategy of NUN marking to indirectly provide the information which is not favored in the context. For instance, speaker A might have made pizza for dinner and speaker B might have found it inappropriate to explicitly say that they do not eat pizza. Speaker B can make use of the context to give rise to exhaustivity implication rather than directly expressing exhaustivity using exclusive *-man*.

Exhaustivity implication can be realized to have scalar reading (i) when the question under discussion involves alternatives that are ordered on a rank-order, and (ii) the uncertainty implication that the speaker is assumed to be ignorant is blocked by the context.

(41) Context: Speakers are talking about different levels of vegetarian diet.

A: What do you eat?

a. B: *na sayngsen-un mek-e.*

I fish-NUN eat-DECL

‘I eat fish.’

↪ Scalar exhaustivity implication: Speaker B does not eat poultry or meat. ≈ Speaker B eats vegetables and fish.

⇒ Context filters out the uncertainty implication since the speaker is providing information about themselves.

- b. B: *na sayngsen-man mek-e*.

I fish-only eat-DECL

‘I only eat fish.’

↪ Exhaustivity implication: Speaker B does not eat food other than fish.

⇒ Scalar reading does not arise.

As in (41a), scalar exhaustivity implication seems to become salient over exhaustivity implication when the context involves ordered set of alternatives; the context in (41) involves the rank-order of vegetarian diet (i.e. vegetable < fish < poultry < meat). In contrast, scalar exhaustivity implication does not seem to arise when *sayngsen* ‘fish’ is marked with exclusive *-man*. Note that NUN-marked and *-man*-marked sentences both give rise to exhaustivity implication under a context without ordered set of alternatives, as in (39b) and (40).

5.3. When both exhaustivity and uncertainty implications are blocked

Unwillingness implication becomes salient when the context blocks exhaustivity implication, as in (42). The assumption on that the speaker would be cooperative would be challenged.

- (42) a. Context: Multiple students took the exam, and multiple people passed.

A: Do you know how well everyone did?

B: *sala-nun pwuth-ess-e*.

Sarah-NUN pass-PST-DECL

‘Sarah passed.’

↪ (main) Inadequacy implication: There is information that will not be shared about other people who possibly passed. Information that is only currently accessible on who passed the exam is ‘Sarah.’

⇒ Context does not disambiguate between sub-implications.

- b. Context change to (42a): Speaker B is the grader of the exam. And speaker A asks a different question.

A: I actually heard that five people passed the exam. Who are they?

B: (= (42a))

↪ Unwillingness implication: Speaker B is not willing to share the information about the other students who passed the exam.

⇒ Context filters out the uncertainty implication. The implication that ‘Speaker B does not know who else passed the exam.’ does not arise; the context provides information that the speaker as a grader should have all information about the exam results.

⇒ Context filters out the exhaustivity implication. The implication that ‘Students other than Sarah did not pass the exam.’ does not arise; the context provides information that there are four additional students who passed.

Context in (42a) gives rise to the main inadequacy implication that, as far as speaker B can say, Sarah is the only student who passed the exam. Nonetheless, the context is underspecified and does not provide further information that would disambiguate between three sub-implications.

A changed context in (42b) filters out the exhaustivity and uncertainty implications, and makes unwillingness implication salient. The context assumes speaker B to be aware of the information; the implication that the speaker is uncertain about the exam results (i.e. uncertainty implication) does not arise. Moreover, the context gives a precise information about the number of students who passed the exam; the implication that there are no other students who passed (i.e. exhaustivity implication) does not arise. Thus, the speakers' expectation on cooperativity is questioned since all other possible implications are blocked from the context.

5.4. Speaker subjectivity

Implications also seem to depend on the speaker's belief on the real world. As in (43), different implications seem to arise when we assume different beliefs for the speakers. Examples in (43) shows three types of belief that speaker can have with respect to whether *nothu* 'notebook' counts as 'paper' that is under discussion.

(43) Context: (There are no specific contexts set before speaker A's question.)

A: Do you have some paper I can use?

- a. Speaker's belief: The speaker is certain that a scrap of notebook can meet the condition as a paper.

B: *na nothu iss-e.*

I notebook have-DECL

'I have a notebook.'

- b. Speaker's belief: The speaker is certain that a scrap of notebook cannot meet the condition as a paper.

B: *na nothu-nun iss-e.*

I notebook-NUN have-DECL

'I have a notebook.'

→ Exhaustivity implication: Speaker B only has a notebook which is not a paper and nothing more including the paper that was asked.

- c. Speaker's belief: The speaker is uncertain whether a scrap of notebook can meet the condition as a paper.

B: *na nothu-nun iss-e.*

I notebook-NUN have-DECL

'I have a notebook.'

→ Uncertainty implication: Speaker B is uncertain whether they have paper that was asked.

In (43a), *nothu* 'notebook' gets bare marking when the speaker believes that a scrap of notebook can count as 'paper' that speaker A asked. In contrast, *nothu* 'notebook' is marked with NUN when the speaker has doubts on whether a scrap of notebook is a type of 'paper.' In both (43b) and (43c), speaker B answers the question with the same sentence marked with NUN but the implication that NUN gives rise to differs. In (43b), exhaustivity implication arises when the speaker believes that a scrap of notebook cannot be counted as 'paper'; the sentence implies that speaker B only has a notebook, and does not have any kinds of paper that was asked. In (43c), uncertainty implication

arises when speaker is uncertain whether a scrap of notebook is ‘paper’; the sentence implies speaker B’s uncertainty as to whether they have paper that was asked.

6. Further implications: predicate marking

This section explores the implication of NUN when it is marked on predicates. The main inadequacy implication seems to interact with the valuational property of the predicates (i.e. positively evaluated and negatively evaluated). Specifically, a NUN-marked sentence “x P-NUN” conveys that there are alternative property Q such that the Q has a different valuational property to P; (i) positively evaluated property P would give rise to negatively evaluated property Q, and (ii) negatively evaluated property P would give rise to positively evaluated property Q. The former is referred to as not-all-good implication, and the latter is referred to as not-all-bad implication. It is important to note that these implications are not cancellable, and thus conventionally arise from the use of NUN.

Similar to inadequacy implication, this main implication (i.e. both not-all-good and not-all-bad implication) can be specified in three ways depending on the context: uncertainty, exhaustivity, and unwillingness. When the context is underspecified, it is in principle possible for all sub-implications to arise. The specific alternatives that interact with sub-implications seem to highly depend (i) on the speaker’s thoughts on which alternative property is the most salient, and (ii) on the contextual conditions. These sub-implications seem to vary with respect to the context and to be cancellable in different contexts. The details will be discussed below.

6.1. Positively evaluated properties

This subsection discusses on the implication that NUN marked on positively evaluated property predicates gives rise to.

6.1.1 Main implication: not-all-good

NUN marking on predicates with positively evaluated properties gives rise to implications that there is a predicate alternative that is negatively evaluated, as in (44).

(44) Context: Multiple people took the exam, and multiple people passed.

A: How well did Sarah do?

a. B: *sala sihem-ey pwuth-ess-e*.

Sarah exam-DAT pass-PST-DECL

‘Sarah passed the exam.’

⇒ No implications arise.

b. B: *sala sihem-ey pwuth-ki-nun hay-ss-e*.

Sarah exam-DAT pass-NMLZ-NUN do-PST-DECL

‘Sarah [passed the exam]_F.’

↪ (main) Not-all-good implication: There is information that will not be shared about an alternative property which is possibly negatively evaluated in the situation.

↪ Sub-implication: e.g. Speaker B is not satisfied with the grade.

In example (44a), the verb *pwuth-* ‘pass’ is unmarked; no implications arise. In example (44b), NUN is marked on the nominalized verb⁵ *pwuth-ki* ‘pass-NMLZ.’ The use of NUN gives rise to an implication that there is a negatively evaluated property other than ‘to pass the exam.’ The implication seems to relate to the most salient alternative property (e.g. to have a grade) among multiple possible alternatives.

The main not-all-good implication is conventional given that it is non-cancellable, as in (45).

- (45) a. (44a)... ✓ and speaker B is satisfied with all the other aspects of the exam.
b. (44b)... # and speaker B is satisfied with all the other aspects of the exam.

6.1.2 Sub-implications and context

Three types of sub-implications seem to arise from the use of NUN; all sub-implications would share the main not-all-good implication in (44b). The particular context filters out other two implications and give rise to a single implication, as in (46).

- (46) There is a further negatively evaluated information that will not be shared (i.e. the main not-all-good implication in (44b)) because...
- a. Context: Speaker B only has information about whether Sarah passed or failed the exam, and about no other aspects.
~> Uncertainty implication: Speaker B does not know how Sarah did in other aspects of exam.
 - b. Context: Speaker B has full information on Sarah’s exam, and it is the only positively evaluated aspect of the situation. However, speaker B intends to convey milder discontent toward this information.
~> Exhaustivity implication: Speaker is discontent that Sarah did bad in the exam other than passing.
⇒ Mild effect: The use of NUN conveys milder discontent on Sarah’s grade comparing to the use of exclusive *-man*. This could also relate to politeness effect.
 - c. Context: Speaker B has full information on Sarah’s exam, but they are not willing to be cooperative. There is a possibility that there are negatively evaluated aspects of the situation in the context.
~> Unwillingness implication: Speaker B is not willing to share the information about the other aspects of Sarah’s exam.

⁵NUN also marks adjectives, as in (i).

- (i) Context: Speakers are talking about speaker B’s cat.
How is your cat?
B: *tekseni kwiyp-ki-nun hay-Ø*.
Ducksun cute-NMLZ-NUN do-DECL
‘Ducksun is cute.’
~> Not-all-good implication: There is information that will not be shared about an alternative property which is possible negatively evaluated.
~> e.g. Speaker B is discontent about other things about their cat.

Note that each sub-implication is cancellable and different context can easily give rise to another implication. Nonetheless the main not-all-good implication is not cancellable even when the context changes.

As for predicate marking, the use of exclusive *-man* ‘only’ and the exhaustive use of NUN seem to have meaningful distinction. As mentioned in (46b), the use of NUN gives rise to milder discontent than marking with an exclusive *-man* ‘only’; compare (44b) and (47).

(47) Context: Multiple steps in applying for a job including taking an exam.

A: How is Suji doing with the application?

B: *swuci sihem-ey pwuth-ki-man hay-ss-e.*

Suji exam-DAT pass-NMLZ-only do-PST-DECL

‘Suji only passed the exam.’

→ Exhaustivity implication: Speaker B is discontent that Suji did bad in the exam other than passing.

This difference is illustrated in (48). Example (44b) cannot be followed by a sentence expressing strong discontent whereas example (47) can be followed by it.

(48) a. (44b)... # Suji failed the exam miserably.

b. (47)... ✓ Suji failed the exam miserably.

6.1.3 Alternatives: contextual variance

The sub-implication seems to depend on the context as to which alternative property arises in that context. Different sub-implication with different alternative easily arise when the context is changed; the changed context would have different alternative aspects of the situation.

(49) Context: Multiple steps in applying for a job including taking an exam.

A: How is Suji doing with the application?

B: *swuci sihem-ey pwuth-ki-nun hay-ss-e.*

Suji exam-DAT pass-NMLZ-NUN do-PST-DECL

‘Suji passed the exam.’

→ (main) Not-all-good implication: There is information that will not be shared about an alternative property which is possibly negatively evaluated in the situation.

→ Sub-implication: e.g. Speaker B is not satisfied about other steps in job application. ≈ Speaker B is not confident about the result of getting a job.

As in (49), the same sentence gives rise to a different sub-implication when we assume a different context for the exam. A different alternative aspect (e.g. other steps in job application) becomes relevant in the context.

The sub-implication also seems to highly depend on the speaker’s thought on which alternative property is the most salient in the context. Different sub-implication with different alternative easily arise when the assumption on the speaker’s thought is changed.

(50) Context: Multiple people took the exam, and multiple people passed. (= (44b))

A: How well did Sarah do?

B: *sala sihem-ey pwuth-ki-nun hay-ss-e.*
 Sarah exam-DAT pass-NMLZ-NUN do-PST-DECL

‘Sarah [passed the exam]_F.’

→ (main) Not-all-good implication: There is information that will not be shared about an alternative property which is possibly negatively evaluated in the situation.

→ Sub-implication: e.g. Speaker B is not satisfied that they submitted the exam late.

For instance, the same sentence in the same context gives rise to a different sub-implication in (50) when we assume that the speaker thinks submitting the exam in time is more salient than the grade.

6.2. Negatively evaluated properties

This subsection discusses on the implication that NUN marked on negatively evaluated property predicates gives rise to. I focus on providing the main not-all-bad implication; the sub-implications and the discussion on alternatives follow the same pattern in section 6.1.

NUN marking on predicates with negatively evaluated properties gives rise to implications that there is a predicate alternative that is positively evaluated, as in (51).

(51) Context: Multiple people took the exam, and multiple people passed.

A: How well did Sarah do?

a. B: *sala sihem-ey tteleci-ss-e.*
 Sarah exam-DAT fail-PST-DECL

‘Sarah failed the exam.’

⇒ No implications arise.

b. B: *sala sihem-ey tteleci-ki-nun hay-ss-e.*
 Sarah exam-DAT fail-NMLZ-NUN do-PST-DECL

‘Sarah failed the exam.’

→ (main) Not-all-bad implication: There is information that will not be shared about an alternative property which is possibly positively evaluated in the situation.

→ Sub-implication: e.g. Speaker B thinks they can at least learn from the experience.

In example (51a), the verb *tteleci*- ‘fail’ is unmarked; no implications arise. In example (51b), the use of NUN gives rise to an implication that there is a positively evaluated property other than ‘to fail the exam.’ Similar to positively evaluated predicates, the implication seems to relate to the most salient property (e.g. to learn from the experience) among multiple possible alternatives.

The main not-all-bad implication is conventional given that it is non-cancellable, as in (52).

(52) a. (51a)... ✓ and speaker B is not satisfied with all the other aspects of the exam.

b. (51b)... # and speaker B is not satisfied with all the other aspects of the exam.

One difference between positively evaluated predicates and negatively evaluated predicates is that the marking of an exclusive *-man* ‘only’ does not seem to appear in the latter predicates. This is illustrated in (53).

(53) Context: Multiple steps in applying for a job including taking an exam.

A: How is Suji doing with the application?

B: # *swuci sihem-ey tteleci-ki-man hay-ss-e.*
 Suji exam-DAT fail-NMLZ-only doPST-DECL
 Intended: ‘Suji only failed the exam.’

6.3. Speaker subjectivity

The evaluative property of the predicates which leads to not-all-good implication and not-all-bad implication seems to depend on the speaker’s intention, as in (54).

(54) Context: Multiple steps in applying for a job including taking an exam.

Speaker’s intention: Also, speakers are willing to do bad in the exam.

A: How well did Sarah do?

a. B: *sala sihem-ey pwuth-ki-nun hay-ss-e.*

Sarah exam-DAT pass-NMLZ-NUN do-PST-DECL

‘Sarah passed the exam.’

→ (main) Not-all-bad implication: There is information that will not be shared about an alternative property which is possibly positively evaluated in the situation.

→ Sub-implication: e.g. Speaker B thinks at least Sarah’s grades are low even though they did not fail.

b. B: *sala sihem-ey tteleci-ki-nun hay-ss-e.*

Sarah exam-DAT fail-NMLZ-NUN do-PST-DECL

‘Sarah failed the exam.’

→ (main) Not-all-good implication: There is information that will not be shared about an alternative property which is possibly negatively evaluated in the situation.

→ Sub-implication: e.g. Speaker B is not satisfied that Sarah’s grades are not bad enough.

Example (54a) involves a predicate that is generally assumed to be positively evaluated; however, it is re-evaluated to be negative when we assume a different context where the speakers are willing to do bad in the exam. This context gives rise to a not-all-bad implication. Example (54b) involves a predicate that is generally assumed to be negatively evaluated; however, it is re-evaluated to be negative when we assume a different context where the speakers are willing to do bad in the exam. This context gives rise to a not-all-good implication.

7. Conclusion

In this paper, I have shown that Korean NUN gives rise to two different types of implications: the main inadequacy implication and three sub-implications, which are uncertainty, exhaustivity, and unwillingness implication. The main inadequacy implication is conventionally associated with NUN given that it is detachable and non-cancellable. The three sub-implications are discussed to arise in interaction with different contextual condition, and contextual changes can easily give rise to different sub-implications. Moreover, I have shown that Korean NUN marking does not show the same distribution as English contrastive marking: (i) there seems to be CT inducing contexts which do not get marked with NUN; and (ii) there seems to be NUN-marked contexts that do not fall under CT. Finally, the paper have discussed about the implication of NUN when it is

marked on predicates. I have argued that the main inadequacy implication seems to interact with the valuational property of the predicates; NUN seems to give rise to not-all-good implication for positively evaluated predicates and not-all-bad implication for negatively evaluated predicates.

Abbreviations

COMP = complementizer, CONJ = conjunction, DAT = dative, DECL = declarative, KA = -i/ka, LOC = locative, LUL = -ul/lul, NMLZ = nominalizer, NOM = nominative, NUN = -(n)un, PST = past, TOP = topic.

References

- Büring, Daniel. 2016. (contrastive) topic. In C. Féry & S. Ishihara (eds.), *The oxford handbook of information structure*. Oxford University Press.
- von Fintel, Kai. 2016. Would you believe it? the king of france is back!(presuppositions and truth-value intuitions). In A. Bezuidenhout & M. Reimer (eds.), *Descriptions and beyond: an interdisciplinary collection of essays on definite and indefinite descriptions and other related phenomena*, 315–341. Oxford University Press.
- Grice, Herbert P. 1975. Logic and conversation. In *Speech acts*, 41–58. Brill.
- Hara, Yurie. 2006. Implicature unsuspendable: japanese contrastive wa. *Proceedings of Texas Linguistics Society* 8. 35–45.
- Kim, Ilkyu. 2018. Is contrastive implicature induced by korean ct-marking -(n)un conventional or conversational? *Korean Journal of Linguistics* 43(2). 223–247.
- Kim, Jieun. 2018. Deriving the contrastiveness of contrastive-nun in korean. *Linguistics and Philosophy* 41(4). 457–482.
- Lee, Chungmin. 1999. Contrastive topic: a locus of the interface–evidence from korean and english. *The semantics/pragmatics interface from different points of view* 1. 317–342.
- Lee, Chungmin. 2003. Contrastive topic and/or contrastive focus. *Japanese/Korean Linguistics* 12. 352–364.
- Rooth, Mats Edward. 1985. *Association with focus (montague grammar, semantics, only, even)*. University of Massachusetts Amherst dissertation.
- Shanon, Benny. 1976. On the two kinds of presuppositions in natural language. *Foundations of language* 14(2). 247–249.
- Stechow, Arnim von. 1981. Topic, focus and local relevance. In *Crossing the boundaries in linguistics*, 95–130. Springer.