



'It is John who is a student.'

(Kuno 1973: 38)

In (1), the speaker can convey exhaustivity using *-ka* and *-ga*. For instance, in (1a), among a set of people who are candidates for being students, only Chelswu is taken to be a student by the use of *-ka*.<sup>1</sup> The same effect can be achieved with an *it*-cleft construction in English as shown in the translation.

However, what the exact source of this effect is still unclear and controversial, and few previous works have tried to ask, let alone have answered, the question of exactly where the exhaustivity comes from. To be more specific, the question is whether the exhaustiveness is conventionally employed by the morphological markers (i.e. *-i/ka*, *-ga*) themselves or it is conversationally drawn; and if the latter, how it is possible. The purpose of this paper is to shed light on how exhaustiveness is made possible by the use of *-i/ka*. Although the focus of this paper is on *-i/ka*, Japanese *-ga* will also be discussed, especially in Section 2 where previous studies are critically examined, because it is known to behave similarly if not identically to *-i/ka* with respect to its property of triggering exhaustivity. Thus, the proposed analysis can also be assumed to apply to accounting for the exhaustivity of *-ga* as well.

The structure of the paper is as follows. In section 2, previous studies and their problems will be discussed in detail. In section 3, the source of the exhaustivity will be explained based on the meaning of *-i/ka* proposed by Kim (2014). It will be argued that the exhaustive implicature induced by *-i/ka* is not conventional but conversational and that the source of getting the exhaustive implicature is the interaction of the meaning of *-i/ka* and the existence of alternatives to the denotation of the *-i/ka*-marked phrase. Finally, section 4 concludes the paper.

## 2. Previous studies

To the best of my knowledge, there are only four previous studies that have dealt at least in some depth with the source of the exhaustivity generated by *-i/ka* (Lee 1995) and *-ga* (Tomioka 2010a, b; Kimura 2012). In particular, the three studies on *-ga* approach the problem by comparing *-ga* and the so-called topic marker *-wa* in terms of their possibility of triggering exhaustivity. In this section, these previous studies will be critically examined.

### 2.1 Lee (1995)

Contra the widely accepted view that takes the exhaustivity to be a conventional aspect of *-i/ka* (based on examples like (1) above), Lee correctly points out that the use of *-i/ka* is neither a necessary nor a sufficient condition for exhaustiveness. First, that *-i/ka* is not a sufficient condition for exhaustivity is shown in (2).

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<sup>1</sup> As will be shown below, it is important to note that *-i/ka* does not necessarily give rise to the exhaustivity effect.

- (2) Q: yocum ai-tul-i mwues-ul cohaha-pnikka?  
 recently kid-Plu-Nom what-Acc like-Int  
 'Recently, what do kids like?'  
 A: ai-tul-i phawueleyince-lul cohaha-pnita  
 kid-Plu-Nom Power Rangers-Acc like-Dec  
 'Kids like only Power Rangers.' (Lee 1995: 130)

In (2A), although the subject NP is marked with *-i*, it does not give rise to exhaustivity at all. Rather, the focused object is the one which triggers exhaustivity. It would be impossible for the morphological marker not to induce exhaustivity if it conventionally conveyed exhaustivity.

The fact that *-i/ka* is not a necessary condition for exhaustiveness can be easily shown in examples like (3) below.<sup>2</sup>

- (3) Q: ku phathi-ey nwu-ka chamsek ha-yess-ni?  
 the party-at who-Nom participation do-Past-Int  
 'Who participated in the party?'  
 A: Chelswu(-ka)  
 'It is Chelswu.'

As shown in (3), the presence of *-i/ka* is clearly not obligatory for the exhaustivity effect. That is, in (3A), exhaustiveness arises whether or not *-ka* is attached to the subject NP. Thus, the assumption that *-i/ka* is directly related to exhaustivity does not withstand closer scrutiny.

Given that *-i/ka* is not directly related to exhaustivity, Lee claims that "the ... focus itself is directly responsible for the exhaustivity effect; the case particles [i.e. *-i/ka* and *-(l)ul*] are not" (Lee 1995: 141). In other words, he argues that "[t]he presence of a case particle is an issue which is independent of the exhaustivity effect" (Lee 1995: 141). Thus, according to Lee, the source of exhaustiveness is the discourse context which requires focus, but not the particle itself.

Then he goes on to argue that the strong correlation between *-i/ka* and exhaustivity, which cannot be denied, is a mere "statistical tendency" that is made possible by the impossibility of other bound morphemes (e.g. *-man* 'only', *-to* 'too', etc.) in the context of his "exhaustivity focus", for which he posits an operator "ASSERT<sub>exh</sub>". That is, he argues that "[t]he dispensability of such a bound morpheme allows for the case particles to occur on the item which bears the focus bound by the operator ASSERT<sub>exh</sub>" (Lee 1995: 142).

<sup>2</sup> Although example (3) is not from Lee (1995), he would base his argument on examples like this, because he uses the same kind of example as (3) to show that the Korean accusative marker *-(l)ul* is not necessary for exhaustivity.

By attributing the source of exhaustivity solely to discourse context, however, Lee fails to capture at least three important points regarding the relation between *-i/ka* and exhaustivity. First, in some question-answer pairs allowing non-exhaustivity (e.g. “mention-some” (van Rooy 2003) reading), *-i/ka* can still induce exhaustiveness.

- (4) A: pwul iss-nun salalm?  
 lighter exist-And person  
 ‘Who has a lighter?’  
 B: John iss-e.  
 John exist-Dec  
 ‘John does.’  
 B’: John-i iss-e.  
 John-Nom exist-Dec  
 ‘John (and only John) does.’ (Kim 2014: 16)

For instance, if somebody wants to smoke and asks the question in (4A), she does not need and intend to know the exhaustive list of people around her who have a lighter; just one is enough who would be willing to give one’s lighter to her. Thus, question (4A) does not require an exhaustive answer, and in that sense, the answer to that question need mention just some but not all the members that make the sentence true.

What is important here is that the mention-some reading is stronger with a bare NP form as in (4B); once the NP is *-i/ka*-marked as in (4B’), the exhaustive implicature is more likely to be generated and the “mention-all” reading is stronger than the mention-some reading.<sup>3</sup> That *-i/ka* triggers the exhaustivity effect in (4) cannot be accounted for under Lee’s (1995) analysis.

Another crucial fact that cannot be naturally captured by Lee’s analysis is that *-i/ka* is not only used in the context of exhaustivity focus, which he calls “default focus”, but also used for contrastive focus, for instance, in correction context.

- (5) A: John hakkyo-ey ka-ass-e  
 John school-Dat go-Past-Dec  
 ‘John went to school.’  
 B: ani-ya. Kim-???(i) ka-ss-e  
 no-Dec Kim-(Nom) go-Past-Dec  
 ‘Kim did.’

<sup>3</sup> For some people, (4B’) might also allow the mention-some reading. However, it is undeniable that exhaustivity (i.e. the mention-all reading) is likely to be generated more easily in (4B’) than in (4B), and the existence of this difference between (4B) and (4B’) in terms of the degree of exhaustivity is enough to argue, contra Lee (1995), that *-i/ka* has something to do with exhaustivity.

In (5), in order to correct what is conveyed by (5A), the speaker of (5B) must use *-i/ka*, which would ultimately generate exhaustivity (and contrastiveness). Thus, contrary to what Lee claims, *-i/ka* is not just a case marker without any inherent semantic/pragmatic effect, but must have something to do with exhaustivity.

Lastly, it is important to note that *-i/ka* can give rise to exhaustivity when it is used in a presupposed subordinate clause as in (6).

- (6) A: John, Mary, Bob cwung nwu-ka phathi-ey ka-ass-ni  
 John, Mary, Bob among who-Nom party-Dat go-Past-Int  
 'Among John, Mary, and Bob, who went to the party?'  
 B: John-kwa Mary-ka ka-ass-e  
 John-and Mary-Nom go-Past-Dec  
 'John and Mary did.'  
 A': ses cwung John-kwa Mary-ka ka-n kes-ul nwu-ka a-ni  
 three among John-and Mary-Nom go-Nmz thing-Acc who-Nom know-Int  
 'Who knows that John and Mary did among the three?'

Here, *-i* in (6A') induces exhaustivity although the clause in which it is located is presupposed and thus the *-i*-marked phrase cannot be focus. It would be hard to explain this exhaustivity if we assume that the source of exhaustivity is focus. These limits of Lee's analysis will be resolved in section 3.

## 2.2 Tomioka (2010a, b)

In discussing the source of exhaustivity induced by *-ga*, Tomioka (2010a, b) compares *-ga* and *-wa* used in the same context as in (7).

- (7) a. Dare-ga paatii-ni ki-ta-ka?  
 who-Nom party-Dat come-Past-Int  
 'Who came to the party?'  
 b. John-wa ki-ta  
 John-wa come-Past  
 'As for John, he came.' (Implicature: I don't know about others.)  
 c. John-ga ki-ta.  
 John-Nom come-Past  
 'John came.' (Implicature: No other people came.)

Pointing out that the two particles are responsible for different types of implicature, that is, *-wa* for uncertainty and *-ga* for exhaustivity, Tomioka accounts for the difference based on "focus-CT[contrastive topic] competition". The basic idea of the focus-CT competition is that

a CT is a more marked option than an ordinary exhaustivity focus. Thus, by using a CT, the speaker avoids this ordinary (and more informative) exhaustive implicature and conveys an uncertainty implicature instead.

What is missing in Tomioka's analysis is why a "typical" focus is marked by *-ga* and a CT by *-wa*. In his analysis, they are just stipulated to be so. In other words, he does not explain what (inherent) aspect(s) of *-wa* and *-ga* lead them to be used to mark CT and focus respectively.

### 2.3 Kimura (2011)

Kimura (2011) tries to explain the source of exhaustivity by postulating that Japanese *-wa* and *-ga* form an informativeness scale  $\langle -ga, -wa \rangle$ . By assuming that *-ga* (but not *-wa*) has the property of exclusive specification, which is, according to Kimura, interchangeable with the meaning of exhaustive listing, he claims that *-wa* is "informationally weaker" than *-ga*. Thus, by using *-wa*, a speaker eliminates the possibility that the referent of the NP to which *-wa* is attached is the one and only one item in the discourse.

Although Kimura's analysis is surely an improvement compared to Tomioka's in that it seeks to explain the why question, it is not without problems. First, the meaning of exclusive specification (or exhaustive listing), which he posits to be an inherent property of *-ga*, cannot be the conventional aspect of *-ga*. If it were, the use of *-ga* in any context should necessarily convey exhaustiveness. But it is widely known that no exhaustiveness occurs when *-ga* is used for "neutral description" (Kuno 1972).

Even if we assume that there are two different lexical items of *-ga* in the lexicon, i.e., *-ga<sub>1</sub>* for neutral description and *-ga<sub>2</sub>* for exhaustive listing, it still cannot save Kimura's proposal. The "dual" approach predicts that the exhaustiveness conveyed by *-ga<sub>2</sub>* must be detachable and not cancellable since it is conventional.

At first glance, the exhaustivity implicature seems to be a conventional implicature. For instance, it is not easy (although not impossible) to continue (6c) with a Korean/Japanese sentence that can be translated into English as 'But it is (possibly) not the case that only John came' or 'I don't know about the others', which strongly suggests that the implicature is not cancellable.

But it is not hard to show that the exhaustivity implicature induced by *-ga<sub>2</sub>* is cancellable and not detachable. A clear example that shows the cancellability of an exhaustivity implicature induced by *-ga* (and *-i/ka*) is shown below.

- (8) Q: nwu-ka phathi-ey wa-ass-ni  
 who-Nom party-Dat come-Past-Int  
 'Who came to the party?'  
 A: John-i/ga came. kukes-ulo chwungpwunhay  
 John-i/ga wa-ass-e it-with enough  
 'John did. That is good enough for me.'

Imagine a situation where ten people came to the party and the speaker of (8A) is satisfied with John's coming because he was the only person that the speaker wanted to see at the party. If (8A) is uttered in this situation, the second sentence in (8A) cancels the exhaustivity implicature generated by the preceding sentence.

Also, as pointed out by Tomioka (2010a, b), bare NPs also usually induce an exhaustivity implicature when it is used in a typical focus position, which shows that *-ga* is not detachable. Thus, the non-conventional nature of the exhaustivity implicature induced by *-ga* makes Kimura's analysis not tenable.

The second problem for Kimura's analysis is related to the scale he posits between *-ga* and *-wa*. Kimura claims that the  $\langle -ga, -wa \rangle$  scale is very similar to the  $\langle \text{the}, a \rangle$  scale in its informativeness-based nature. In order to support this claim, he argues that the "property of *wa* as a topic marker shows that *wa* is semantically more general than *ga*. In other words, *wa* is informationally weaker than *ga*" (Kimura 2011: 94).

His claim that *-wa* is semantically more general than *-ga* comes from the fact that a *-wa*-marked NP can more easily refer to the element in the previous discourse. I would like to point out two things regarding this argument. First, it is very hard to understand how *-wa*'s ability to more easily refer to the element in the previous discourse makes it semantically more general, especially since the notion of semantic generality is undefined and thus hard to grasp. Second, even if we accept that the ability to easily refer to a discourse-given referent is due to semantic generality, it is still not clear how something that is semantically more general is informationally weaker. Unless Kimura provides an explicit definition of semantic generality and how it is related to the strength of informativeness, the validity of his claim is hard to evaluate.

Furthermore, Kimura does not provide enough evidence that the  $\langle -ga, -wa \rangle$  scale is really a scale. In order to support the view that the *and* and *a* form an informativeness scale, Horn & Abbott (2012) show that the  $\langle \text{the}, a \rangle$  scale does have the characteristics of a regular scale, except for the fact that their difference is conventionally signaled but not entailed.

The first characteristic is that the members of a scale are "natural paradigmatic alternatives, a fact that clearly emerges in focus or contrastive environments" (Horn & Abbott 2012: 334). The second characteristic is that the scalar implicature induced by the member with weaker informativeness can be canceled, suspended or reinforced. These phenomena are known to be standard diagnostics for weak vs. strong scalar competitors (e.g. Horn 1972; 1989, Ch. 4). Lastly, scalar competitors can be involved in metalinguistic negation, which is "a metalinguistic or echoic device to reject an utterance with a scalar value as overly weak" (Horn & Abbott 2012: 337). Examples of each characteristic are introduced below, all of which are from Horn & Abbott.<sup>4</sup>

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<sup>4</sup> See Horn & Abbott (2012) for many more examples of each diagnostic.

- (9) Paradigmatic alternatives (Horn & Abbott 2012: 334)  
 A (host to guest): "Did you find a towel?"  
 B (guest to host): "I found the towel."
- (10) Implicature cancellation (Horn & Abbott 2012: 335)  
 Yet time and again, North Korea is cited as not only "a" but "the" major threat to US security.
- (11) Metalinguistic negation (Horn & Abbott 2012: 337)  
 Graham claims that cancer selection is not a but the driving force in the emergence of complex animal life.

Kimura applies the first two diagnostics to the <-ga, -wa> scale. First, in terms of the first diagnostic, that is, whether -ga and -wa are natural paradigmatic alternatives, he concludes that they are paradigmatic alternatives because the two particles are mutually exclusive and cannot be attached to a NP together (e.g. \**John-ga-wa* or \**John-wa-ga*), which is also the case in Korean (-i/ka vs. -(n)un<sup>5</sup>)<sup>6</sup>.

Secondly, he also claims that -ga and -wa can be used in contrastive environments as shown in (12), and that uncertainty (his "non-specificity") implicature can be canceled by the use of -ga.

- (12) Mr. Tanaka is out of the office today. Someone asks what happened to him. One of his colleagues answers:  
 Tanaka-kun-wa Tokyo ni it-ta. Iya, Tanaka-kun-ga  
 Tanaka-Mr.-wa Tokyo to go-Past No, Tanaka-Mr.-Nom  
 it-ta noka  
 go-Past Eps  
 'Mr. Tanaka has gone to Tokyo. Oh, it is Mr. Tanaka who has gone to Tokyo, isn't it?'  
 (Kimura 2011: 97-98)

However, the context given in (12) can hardly be taken to be contrastive. Rather, the subject of the first sentence is more likely to be a plain (non-contrastive) topic. If this is correct, there is no "non-specificity" implicature to be canceled in the example above. (My intuition that the Korean translation of (12) does not sound natural could be attributed to the non-contrastive interpretation of the first sentence.)

In order to see whether -i/ka felicitously cancels the non-specificity (or uncertainty)

<sup>5</sup> -(N)un is the Korean counterpart of -wa. Both are known as a (contrastive) topic marker.

<sup>6</sup> However, he also notes that the distribution of -ga is much more restricted than that of -wa due to the nominative-marking nature of -ga.



implicature, let us look at an example that clearly conveys contrast induced by *-(n)un*.

- (13) Q: John-kwa Kim-i sakwa mek-ess-ni  
 John-and Kim-Nom apple eat-Past-Int  
 A: John-un mek-ess-e. ?/??Ani, sasil John-i mek-ess-e.  
 John-Top eat-Past-Dec No actually John-Nom eat-Past-Dec  
 'John ate (it).' 'No, actually it is John that ate (it).'

It is interesting to note that the acceptability of the second sentence in (13A) is hard to judge. It seems not totally bad, but it is not totally good either. This is not predicted if *-i/ka* and *-(n)un* form an informativeness scale,  $\langle -i/ka, -(n)un \rangle$ . Note that prosodic focus on *-i* cannot help to improve the acceptability. The degraded acceptability of the second sentence in (13A) is also shown by the fact that if *-i* is replaced with *-man* 'only', which conventionally conveys exhaustivity, the sentence becomes totally acceptable.

Moreover, *-i/ka* and *-(n)un* (and probably *-ga* and *-wa*) do not pass the metalinguistic negation test. Let us look at the example in (14).

- (14) ???John-un-i anila John-i phathi-ey ka-ss-e  
 John-un-Nom not John-Nom party-Dat go-Past-Dec  
 'Not John-un but John-i went to the party.'

The metalinguistic negation in (14) makes the sentence unacceptable, which is not predicted if *-i/ka* and *-(n)un* form an ordinary scale. This is clearly contrasted with (11) where the  $\langle \text{the}, a \rangle$  scale passes the metalinguistic negation. In the following, I will provide a new analysis of why *-i/ka* (and possibly *-ga*) generates exhaustivity (but not uncertainty) implicature, without resorting to the putative  $\langle -i/ka, -(n)un \rangle$  scale.

### 3. Where does exhaustiveness come from?

In this section, I will provide an account of how *-i/ka* can give rise to exhaustivity although they are not directly (or inherently) related to each other. The exact relationship between the two will be explained by discussing the inherent property of *-i/ka*, which is based on Kim's (2014) analysis, and how it can induce exhaustiveness with the help of discourse context.

#### 3.1 The function of *-i/ka* as unique specification

Based on various types of discourse contexts in which *-i/ka* is (in)felicitous, Kim (2014) argues that the function of *-i/ka* is to uniquely specify the meaning of the phrase to which it is attached.<sup>7</sup> The function of unique specification can hardly be defined formally but can be

informally understood as “pinpointing” or “specifically pointing at” something. In other words, *-i/ka* can be thought of as a linguistic “pointer” that one can use in order to specifically point at any type of linguistically expressed meaning, just as we can point at physical entities with our fingers.<sup>8</sup>

Note that the understanding of the meaning of *-i/ka* as a kind of specification (which can be translated as *ciceng* in Korean) is not new at all (e.g. Shin 1975; Nam 1996; Ko 2002). What Kim’s (2014) analysis differs from the previous studies is that it makes it clear that the meaning of (unique) specification should be understood as a kind of performative. Let me explain what it means for the meaning of *-i/ka* is a performative.

The meaning of *-i/ka* is different from the meaning of “ordinary” words like *John*, *book*, *sad*, and *go*, in terms of truth-conditional effect. While the meanings of these words are truth-conditional, that of *-i/ka*, that is, unique specification, has no truth-conditional effect on the meaning of the sentence in which it occurs. Rather, by using the morphological marker, the speaker performs an act of uniquely specifying (or pinpointing) a referent of whatever marked with *-i/ka*.

This special status of *-i/ka* can be well captured under the framework of multiple dimensions of meaning (Kaplan 1999; Potts 2003, 2007; Potts & Kawahara 2004; Gutzmann 2013), which divides meaning into two types: truth-conditional (TC) meaning and use-conditional (UC) meaning. A UC item (henceforth UCI) can be defined as any lexical device that conveys “meaning that does not contribute to the truth conditions of a sentence, but instead, ... affect[s] the conditions in which the sentence can felicitously be uttered” (Gutzmann 2013: 33). In this sense, *-i/ka* is well qualified to be a UCI, since its meaning of unique specification (but not its nominative-marking function) only affects felicity but not the truth condition of a sentence as shown in examples like (3) and (4).<sup>9</sup>

One might be curious as to what makes unique specification a special property of *-i/ka*, because in a sense all referring expressions (are used to) point at the referent. The special status of *-i/ka* is gained by its having unique specification as UC meaning. This is the difference between *-i/ka* and ordinary referring expressions. That is, although both can uniquely specify a discourse referent, *-i/ka* is special in that the speaker performs an act of unique specification using *-i/ka*, while it is impossible to do so with referring expressions.

In addition, regarding the meaning of *-i/ka*, what is important for our purposes is to understand that the use of *-i/ka* does not automatically presuppose the existence of alternatives to the meaning of the *-i/ka*-marked element. A number of previous studies have argued that the core function of *-i/ka* is to presuppose a set of alternatives to the denotation

<sup>7</sup> See Kim (2014) for the exact types of contexts and the (in)felicity of *-i/ka* within those contexts.

<sup>8</sup> The function of *-i/ka* as a nominative case marking is not denied in this paper. That is, *-i/ka* is assumed to have the dual function of unique specification and nominative-marking.

<sup>9</sup> See Kim (2014) for a more detailed analysis of *-i/ka* as a UCI, where it is argued to be a mixed functional UCI.

of the element to which it is attached (e.g. Shin 1975; Choi 1984; Choi 1987; Ko 2002; Kim 2011). However, most of them provided few pieces of evidence to support their claim except for Ko (2002), and Kim (2014) convincingly showed that the evidence provided by Ko is not valid and *-i/ka* does not inherently presuppose the existence of alternatives. In what follows, it will be shown that the existence of alternatives in discourse context is a crucial factor for the generation of exhaustivity by the use of *-i/ka*.

### 3.2 Exhaustivity = unique specification + existence of alternatives

If Kim's (2014) analysis of the meaning of *-i/ka* is on the right track, the fact that no direct relation exists between *-i/ka* and exhaustivity naturally follows, since its meaning is not exhaustivity itself. Now, let us investigate in detail how exhaustivity is made possible by the use of *-i/ka*.

The key to resolve this problem is to figure out in which situation *-i/ka* evokes exhaustiveness. As pointed out above, *-i/ka* is neither a sufficient nor a necessary condition for exhaustivity, and *-i/ka* triggers the exhaustivity effect only in certain discourse contexts. Such contexts include (contrastive) focus and mention-some reading as in (3)-(5).

What do the contexts of (contrastive) focus and mention-some reading have in common? It is the existence of alternatives to the referent of the *-i/ka*-marked phrase. It does not matter whether the set of alternatives is explicitly mentioned (and thus identifiable in the previous context) or "closed" enough to be able to be easily identified. Mere existence of alternatives in discourse context is enough for *-i/ka* to induce exhaustivity. For instance, in (3), although it is not clearly known who the alternative(s) to Chelswu is in the given context, it is certain that there must be some set of alternative(s) in the mind of the discourse participant uttering (3Q) (e.g. among her classmates), and that is enough for the exhaustivity to arise.

That the existence of alternatives is crucial for *-i/ka* to induce exhaustivity is further supported by the fact that *-i/ka* used in selection context also gives rise to exhaustivity as shown in (15).

(15) Q: Among John and Kim, who likes Mary?

A: John-i cohahay.

John-Nom like

'John likes (her).'

In (15), the clear existence of an alternative to John, that is, Kim, derives the exhaustivity (and contrast) effect in (15A).

What is crucial is that when *-i/ka* is used in a (contrastive or typical) focus position, the meaning of unique specification (i.e. the action of "pinpointing") guarantees that the referent of the NP is uniquely identified with the focus variable (e.g. [x likes Mary], [x = John] in (15A)). This identification effect then can be naturally inferred to give rise to an exhaustivity

implicature; that is, if only one alternative is specifically pointed at among a set of possible alternatives, it is reasonable to assume (from the hearer's point of view) that the pinpointed element is the only candidate that satisfies the variable while the rest do not.

Of course, as noted above, bare NPs without *-i/ka* also induce an exhaustivity implicature in a typical focus position. This can be explained by the assumption that 1) exhaustivity through identification is the unmarked interpretation of a focus expression (cf. Kenesei 2006; Wee 2010; Tomioka 2010a, b), and that 2) bare NPs, which do not convey any conventional non-truth-conditional meaning, get their interpretation in terms of topic- and focus-hood entirely from discourse context.

Therefore, *-i/ka*-marked NPs and bare NPs are the same in that they do not conventionally generate exhaustive implicature in (contrastive) focus context. The difference lies in that, in the case in which *-i/ka* is used, exhaustivity is evoked through the act of unique specification, which is done conventionally by *-i/ka*, whereas it is done conversationally with bare NPs purely by the discourse context.

As shown in (4), which is repeated below, the difference between *-i/ka*-marked NPs and bare NPs in terms of their possibility of triggering exhaustivity occurs when a set of alternatives exist but no exhaustivity is expected or required by the discourse context.

- (4) A: pwul iss-nun salalm?  
 lighter exist-And person  
 'Who has a lighter?'  
 B: John iss-e.  
 John exist-Dec  
 'John does.'  
 B': John-i iss-e.  
 'John (and only John) does.'

In such a case, *-i/ka*-marked NPs still give rise to exhaustiveness due to the existence of alternatives (and the function of *-i/ka*), but bare NPs do not since the hearer is not required to interpret the sentence exhaustively under the given context.

Again, it has to be emphasized that if no alternative is assumed to exist to the referent of an *-i/ka*-marked phrase, *-i/ka* cannot induce exhaustivity. This point is clearly shown, for instance, in (2), repeated below.

- (2) Q: yocum ai-tul-i mwues-ul cohahap-nikka?  
 recently kid-Plu-Nom what-Acc like-Int  
 'Recently, what do kids like?'  
 A: ai-tul-i phawueleyince-lul cohahap-nita  
 kid-Plu-Nom Power Rangers-Acc like-Dec  
 'Kids like only Power Rangers.'

That is, in the context given in (2), there is no alternative to the referent of the *-i/ka*-marked phrase, that is, kids, in either (2Q) or (2A). In either case, no exhaustivity occurs despite the use of *-i/ka*.

Another good example that shows the same point is *-i/ka* used in a presupposed subordinate clause, as in (16).

- (16) John-i        keki-ey    tochak    ha-yess-ul        ttay,  
       John-Nom    there-Dat arrival    do-Past-Adjv    when,  
       Mary-nun    imi        keki-lul    ttena-ass-ta  
       Mary-Top    already    there-Acc    leave-Past-Dec  
       ‘When John arrived there, Mary had already left there.’

Unlike the case in (6), if the referent of the *-i*-marked phrase in the presupposed subordinate clause has no alternatives, *-i* does not induce exhaustiveness at all. Exhaustivity implicature is generated only if some set of alternatives is posited in the given context.

To summarize, the source of the exhaustivity made possible by *-i/ka* is the interaction of its conventional function of unique specification and the existence of alternatives to the denotation of an element to which *-i/ka* is attached. Hence, the nature of exhaustivity implicature generated by *-i/ka* is conversational not conventional.

The proposed analysis in this paper is superior to the previous studies discussed above. First, unlike Lee (1995), who cannot easily explain why *-i/ka* induces exhaustivity in the mention-some reading context, it can account for the exhaustivity based on the fact that there exists, just as in the context of ordinary focus, a set of alternatives contextually available in the context of mention-some reading. Moreover, it can also naturally capture the fact that *-i/ka* gives rise to exhaustiveness when it is used not only for default focus but also for contrastive focus such as correction and selection, which is not predicted under Lee’s analysis.

Second, Tomioka’s (2010a, b) failure to account for why Japanese *-ga* is related to exhaustivity (and *-wa* to uncertainty) is also well explained by the analysis proposed here. The problem is that Tomioka does not provide any meaning/function of *-ga* which can be meaningfully related to exhaustivity. This problem is solved in this paper by taking the meaning of *-i/ka* to be unique specification, which is independently motivated by the consideration of its (in)felicity in various types of contexts (Kim 2014) and goes along with exhaustivity. That is, by positing that the function of *-i/ka* is unique specification, why *-i/ka* is so closely related to exhaustivity is naturally explained.

Lastly, from the perspective of the current analysis, whether *-i/ka* and *-(n)un*, each of which is a counterpart to Japanese *-ga* and *-wa*, form a scale or not is irrelevant to how and why *-i/ka* can trigger exhaustivity. As discussed above, contra Kimura (2011), no convincing evidence exists for the claim that *-i/ka* and *-(n)un* (and *-ga* and *-wa*) form a scale in terms of informativeness.

Rather, empirical data support exactly the opposite; that is, the two particles in both languages do not form such a scale. For instance, that the relation between *-i/ka* and *-(n)un* is not asymmetric but symmetric is shown by the fact that both exhaustivity implicature of *-i/ka* and uncertainty or contrastive implicature of *-(n)un* are not easy to be canceled once they are generated.

- (17) A: John-kwa Mary cwung nwu-ka phathi-ey ka-ass-ni  
 John-and Mary among who-Nom party-Dat go-Past-Int  
 'Among John and Mary, who went to the party?'  
 B: John-i ka-ss-e  
 John-Nom go-Past-Dec  
 'John (and only John) did.'  
 C: John-un ka-ss-e  
 John-Top go-Past-Dec  
 'John did, (but I don't know about the others / but the others didn't).'

In (17B) and (17C), the exhaustivity induced by *-i/ka* and the uncertainty/contrastiveness caused by *-(n)un* are not easily cancellable, which is shown by the fact that one cannot felicitously add sentences like *But Mary did too* to either (17B) or (17C). What is important here is that one is not easier or harder than the other to be canceled, which is not predicted if *-i/ka* is more informative than *-(n)un*.<sup>10</sup>

Let us compare the symmetry between *-i/ka* and *-(n)un* with the asymmetry shown by *the* and *a*. Horn & Abbott (2012: 333) provide an example below to show that asymmetry exists between *the* and *a* in terms of informativeness.

- (18) a. #Russell was the author of Principia Mathematica; in fact there were two.  
 b. Russell was an author of Principles of Mathematics, and in fact the only one.

What (18) shows is that the uniqueness conventionally conveyed by *the* is harder to cancel than non-uniqueness conversationally conveyed by *a*. Without the asymmetry of this kind, *-i/ka* and *-(n)un* (and *-ga* and *-wa*) cannot be argued to form a scale with respect to informativeness.

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<sup>10</sup> One reviewer claimed that one can easily add *But Mary did too* to the sentence in (17B). It is only possible when no alternatives exist in the discourse. Once a set of alternatives is posited in the discourse as shown in (17A), the exhaustivity is generated by *-i/ka* and it is not easy (although not impossible) to cancel. Of course, it is not unreasonable to expect that the more "closed" the set of alternatives, the harder it is to cancel the exhaustivity.

#### 4. Conclusion

So far in this paper, we have investigated why and how *-i/ka* can give rise to exhaustivity in (only) certain contexts. Based on Kim's (2014) analysis of the meaning of *-i/ka*, it has been claimed that the exhaustivity is a pragmatic effect derived from the interaction of the function of *-i/ka* (i.e. unique specification) and the existence of alternatives to the denotation of an *-i/ka*-marked phrase in discourse context. That is, exhaustivity occurs when the speaker uniquely specifies one referent among a set of alternatives. Therefore, according to the proposed analysis, the nature of the exhaustive implicature induced by *-i/ka* is not conventional but conversational.

One might think that the claim made in this paper is too trivial to be worth considering seriously, because it is taken for granted that the existence of alternatives is a necessary condition for an exhaustivity effect to occur. For those who do not find my proposal worthwhile enough, I want to point out two things. First, the worth of this paper must be found not in the fact it argues for the necessity of the existence of alternatives for exhaustivity induced by *-i/ka*, but in the fact that it unveils the nature of exhaustivity induced by *-i/ka* by being explicit about the meaning of *-i/ka* and how it interacts with the existence of alternatives to give rise to exhaustivity. Second, if the proposed analysis still seems not worthy of attention, it has to be emphasized that this simple analysis not only has never been explicitly put forward or acknowledged by previous studies but also is not consistent with any of them; that is, previous analyses of *-i/ka* do not go along with the nature of the exhaustivity explained here although it looks so simple and (thus) trivial.

Lastly, as mentioned above, it may well be the case that the exhaustivity triggered by Japanese *-ga* can be explained in a similar, if not the same, way. Since the exhaustivity induced by *-ga* is not conventional either, its nature must be explained by resorting to the interaction of the inherent property of *-ga* and discourse context (e.g. existence of alternatives). Figuring out the exact source and mechanism of the exhaustivity induced by *-ga* and comparing it with the analysis proposed here would be an important topic for future research.

#### <References>

- Choi, Soo-Young. 1984. Topicalization and the nominative marker: Focusing on *-(n)un* and *-i/ka* (written in Korean). *Language Research* 20.3: 233-250.
- Choi, Young-Hwan. 1987. *A semantic analysis of -(n)un and -i/ka* (written in Korean). Master's Thesis. Seoul National University.
- Gutzmann, Daniel. 2013. Expressives and beyond: an introduction to varieties of conventional non-truth-conditional meaning. In Daniel. Gutzmann and H.-M. Gärtner (eds.) *Beyond*

- expressives: explorations in use-conditional meaning*. Brill.
- Horn, Laurence. 1972. *On the semantic properties of logical operators in English*. Ph.D. dissertation. UCLA. Reprinted by Indiana University Linguistic Club, 1976.
- Horn, Laurence. 1989. *A natural history of negation*. University of Chicago Press.
- Horn, Laurence., Barbara Abbott. 2012. <the, a>: (in)definiteness and implicature. In Campbell, J. K. et al. (eds.) *Reference and Referring: Topics in Contemporary Philosophy*, volume 10. MIT Press.
- Im, Hong-Bin. 1972. *A study of topicalization in Korean* (written in Korean), a Monogram of Korean Studies 28. Kwuke Yenkwuhway.
- Kaplan, David. 1999. *The meaning of ouch and oops: explorations in the theory of meaning as use*. Master's Thesis. UCLA.
- Kenesei, István. 2006. Focus as identification. In Molnár, Valéria. & Susanne Winkler (eds.) *The architecture of focus*, 137-168. Berlin: Mouton de Gruyter.
- Kim, Ilkyu. 2014. On the Meaning of Korean -i/ka. *Language and Linguistics* 63: 1-26.
- Kim, Mihyoung. 2011. An analysis of the basic premises and functions of Korean particles i/ka and eun/neun (written in Korean). *Discourse and Cognition* 18.3: 23-64.
- Kimura, Kazunori. 2011. *Pragmatic implicatures and particles in Japanese*. Ph.D. dissertation. SUNY at Buffalo.
- Ko, Seok-ju. .2002. On the meaning of 'ka' (written in Korean). *Kwukehak* 40: 221-246.
- Kuno, Susumu. 1972. Functional sentence perspective: a case study from Japanese and English. *Linguistic Inquiry* 3: 269 - 320.
- Kuno, Susumu. 1973. *The structure of the Japanese language*. MIT Press.
- Lee, J.-K. 1994. *The syntax and pragmatics of Korean case*. Ph.D. dissertation. University of Texas at Austin.
- Lee, Yae-Sheik. 1995. *Scales and alternatives: Disjunction, exhaustivity, and emphatic particles*. Ph.D. dissertation. University of Texas at Austin.
- Lee, Chungmin. 2003. Contrastive topic and/or contrastive focus. In B. McClure (ed.), *Japanese/Korean linguistics* 12. CSLI.
- Nam, Ki-Shim. 1996. *An investigation of Korean grammar* (written in Korean). Thayhaksa.
- Potts, Christopher. 2003. *The logic of conventional implicatures*. Ph.D. Dissertation. UCSC.
- Potts, Christopher. 2007. The expressive dimension. *Theoretical Linguistics* 33.2: 165-198.
- Potts, Christopher. & Shigeto Kawahara. 2004. The performative nature of Japanese honorifics. In K. Watanabe and R. B. Young (eds.) *Proceedings of Semantics and Linguistic Theory* 14. Cornell University Linguistics Department: CLC Publications.
- Shin, Chang-Soon. 1975. A study on the issue of subject in Korean (written in Korean). *Mwunpep Yenkwu* 2: 131-170.
- Tomioka, Satoshi. 2010a. Contrastive topics operate on speech acts. In Zimmermann, Malte. & Caroline, Fery (eds.) *Information structure: theoretical, typological, and experimental perspectives*, 115-138. Oxford, New York: Oxford University Press.
- Tomioka, Satoshi. 2010b. A scope theory of contrastive topics. *Iberia* 2.1: 113-130.



- van Rooy, Robert. 2003. Questioning to resolve decision problems. *Linguistics and Philosophy* 26: 727-763.
- Wee, Hae-Kyung. 2010. Topicality and focality of contrastive topic. *Language and Information* 14.2: 47-70.

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