The Semantics of Bare NPs and Genericity in Korean*

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Investigating certain dependencies that hold among the quantificational properties of bare NPs (BNPs), the types of predications and the types of predicates, I first observe that topic-marked BNPs and exhaustively focused ones may give rise to a generic interpretation regardless of which type of predicates is predicated of them. Tackling the question of how these NPs contribute to the generic interpretation of the sentences they are part of, I argue that they are proper names of kinds when they are interpreted as generics. This naturally leads me to represent the proper and derived kind predications involving (thematically) topic-marked BNPs in terms of the implicational logical structure which incorporates the notion 'Homogeneous Recognizable Subclass' introduced by Link (1988) and the identity relation that equates kinds, their individual-level or stage-level realizations, and sums of these realizations.

This paper attempts to explicate the semantic properties of Bare NPs (BNPs) in Korean and the question of how these properties and other factors are related with the availability of the generic interpretation of a sentence which a BNP is part of.

The following pair of examples illustrates the fact that genericity and a

* This paper is a shortened revision of my earlier work, The Korean Topic Construction and the Semantics of Bare NPs, read at the 6th Workshop on Theoretical East Asian Linguistics in June of 1991. Eliminating parts not directly relevant to the semantics of bare NPs and genericity, I here tried to elaborate on the claims that I had proposed concerning the current theme in the earlier paper.

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certain aspect of BNPs such as topicality are closely related.¹ ²

(1) a. Namca-ka tampay-lul piwunta.
   a man/the man-NOM cigarettes-ACC smoke
   ‘A/The man is smoking cigarettes.’

   men/the man-TOP cigarettes-ACC smoke
   ‘Men smoke cigarettes.’ or ‘The man smokes cigarettes.’

Sentences (1a–b) form a ‘minimal pair’ in that they differ only with respect to the particles attached to their subject NPs. (1a) has a nominative-marked NP, but (1b), a topic-marked one. But the contrast in meaning between the two sentences is striking. Putting aside the definite description use of the subject NPs, (1a) gives an episodic description of the situation in which a man is smoking cigarettes, whereas (1b) expresses some characteristic property of manhood that men (usually) smoke cigarettes. The contrast in question just shows that genericity is subject to the semantic and/or pragmatic aspects of nominative- or topic-marked BNPs.

A paradigm like the one in (1) calls for an adequate description of when BNPs give rise to the generic interpretation of the sentences which they are part of. Examining the dependencies among the quantificational properties of BNPs, the types of predications and the types of predicates, I notice that topic-marked BNPs and exhaustively focused BNPs may give rise to a generic interpretation regardless of which type of predicates is predicated of them. This observation naturally leads to the conclusion that they are proper names of kinds when we address the question of how these NPs contribute to the generic interpretation of the sentences they are part of. Given this, I propose to represent the proper and derived kind predications triggered by thematically topic-marked BNPs in terms of the implicational logical structure which incorporates the notion ‘Homogeneous Recognizable Subclass’ introduced by Link (1988) and the identity relation that equates

¹ All Korean examples in this paper are orthographically transcribed in terms of the Yale Romanization. The following abbreviations are used:
   ACC: accusative-marker  NOM: nominative-marker
   PL: plural marker        TOP: topic-marker

² As far as I know, this fact was first brought into light by Carlson (1977). For discussion of the problem it poses, see Carlson (1989) and Link (1988).
kinds, their individual-level or stage-level realizations, and sums of these realizations.

1. Basic Notions and Assumptions

For the sake of concreteness, I would like to make explicit some of the basic notions and assumptions on which our main claims are relied before we proceed.

Let us first consider the sentences in (2).

(2) a. John-i hakkyo-ey kassta.
   John-NOM school-to went
   ‘John went to school.’ or
   ‘It is John under consideration that went to school.’

   John-TOP school-to went
   ‘As for John, he went to school.’ or
   ‘JOHN went to school, but SOMEONE ELSE did not.’

Sentence (2a) contains the NP marked with a nominative-marker i, but sentence (2b), the NP marked with a topic-marker un. It has been said that a sentence like (2b) has the topic-comment structure, but a sentence like (2a) is neutral to the topic-comment dichotomy, as long as it is uttered with a normal intonation.

Handling the sentences in (2), I follow Kuno’s (1972) analysis of the Japanese nominative-marker ga and topic-marker wa. Depending on the context of utterance, (2a) is understood to have a neutral description or exhaustive listing reading. On the former reading, (2a) describes the mere event of John’s going to school in the past, but on the latter, it means that John is the only person under consideration that went to school. Such exhaustive listing readings presuppose that the open sentence formed by substituting a variable for the nominative-marked NP is true by existential clause, and thus they are pragmatically conditioned. That is, (2a) cannot be interpreted this way out of context. No such pragmatic constraint is placed on the availability of the neutral description reading of the sentence. On this reading, (2a) asserts the existence of the referent of the nominative-marked NP and thus accommodates it directly into the domain of dis-
course. Sentence (2b) is also ‘pragmatically’ ambiguous, but in a different way. It has the theme presentation and the contrastiveness readings. On the former reading, the topic-marked NP is thematicized, and the sentence is understood to describe a state of affairs with exclusive reference to the referent of the topic-marked NP. On the latter reading, the referent of the topic-marked NP is put in contrast with something else in the discourse. The entity which it is put in contrast with is often implicitly assumed, as in (2b), or explicitly indicated as in (3).³

(3) John-un tenass-ciman, Mary-nun an-tenassta.
   John-TOP left-but Mary-TOP not-left
   ‘JOHN left, but MARY did not.’

For the purposes of this paper, I assume the topic of a sentence is what the sentence is about, following Reinhart’s (1981) approach. I also adopt Kuroda’s (1972) insight on his analysis of the Japanese topic-marker wa. Maintaining that Japanese topic constructions involve categorical judgment according to which one affirms or denies the idea of the predicate of the idea of the subject, Kuroda proposes to represent it in terms of implicational form in (4).

(4) a. If x is A, then x is B (is true).
   b. If x is John, then x went to school.

In (4) A stands for the wa-phrase, and B, for the predicate of a sentence. On his analysis, utterance (2b) would be assigned to the implicational interpretation in (4b).

As Anna Szabolsczi (personal communication) pointed out to me, however, (4b) is logically equivalent to the proposition John went to school. In order to avoid this kind of problem, I propose to replace (4a) with the following implicational form:⁴

³ In a case like (2b), it is the context of use that determines whether the sentence is used to convey theme presentation or contrastiveness.
⁴ Note that \( \exists Q \forall P [P \text{ is true of } T](Q) \) is logically equivalent to \( \exists Q (Q \text{ is true of } T) \). The reason that I prefer the former formula to the latter is that it is more parallel to the information process of the sentence with topic-marked NP.

I am indebted to Barbara Partee for her suggestion of the use of Con Var, a context variable, in the logical form of topicalized sentences.
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(5) \[ \exists Q \land P \text{ is true of } T](Q) \land ^M \land \text{Con Var} \rightarrow \| R \text{ is true of } T \| ^M \]

In (5) T is a metavariable for a topic-marked NP, and R for a predicate of a sentence. P and Q are property-denoting variables, but Con Var is a context variable that restricts its coordinate to properties which require the existence or salience of the referent of the topic-marked NP. Given (5), (2b) would be assigned to the logical form in (6).

(6) \[ \exists Q \land P \text{ is true of John}(Q) \land ^M \land \text{Con Var} \rightarrow \]
\[ \| \text{John went to school} \| ^M \]

(6) says that if John has a property in the context where the salient presentation of John is assumed, that property describes the previous action of going to school. If (2b) is uttered out of such a context, it may be regarded as an infelicitous utterance since (6) always renders vacuously true and thus uninformative. Although the use of Con Var is crucial to the analysis of sentences with topic-marked NPs, especially thematically topic-marked ones, I will omit it in the subsequent discussion.

2. The Semantics of BNPs: Predications and Predicates

At the beginning of the paper, I briefly mentioned that genericity and certain aspects of BNPs like topicality are closely related. This fact seems to provide a clue that helps to find out the basic dynamics of generic sentences in Korean. I therefore examine and analyze it more systematically in this section.

In order to do so, I need, first of all, to discuss certain semantic properties of Korean BNPs. It has been said in the literature that they are many ways ambiguous. Let us consider the sentences in (7)-(8).

(7) a. Han haksayng-i sensayng-kwa hakkyo-ey tulekako issessta.
    one student-NOM (his)teacher-with school-to entering was
    Haksayng-un khi-ka ku-ciman, sensayng-un
    the student-TOP height-NOM (was) big-but the teacher-TOP
    cakassta.
    (was) small
    'A student was going to school with his teacher. While the student
    was tall, the teacher was short.'
b. Mwun pakk-ey haksayng-i chacawassta.
   door outside-at a/the student-NOM visited
   'A/The student visited outside of the door.'

c. Kay-nun cic-ciman talkun acik an wunta.
   A/The dog-TOP barks-but a/the rooster yet not crows
   'A/The dog barks, but a/the rooster does not crow yet.'

(8) a. Say-nun nalcimsungita.
   birds-TOP (are) feathered animals
   'Bird are feathered animals.'

b. Kunin-un yongkamhata.
   soldiers-TOP (are) brave
   'Soldiers are brave.'

c. Radio-nun hunhata.
   radios-TOP (are) common
   'Radios are common.'

In (7a) the topic-marked BNPs of the second clause are used to refer back to the referents that were introduced by the BNPs of the first clause. The latter BNPs are examples of the indefinite use, and the former, examples of the definite one. Given the contrast shown in (7a), one might think that topic-marked BNPs are always definite and nominative-marked ones are always indefinite. We can see easily that it is not the case. Just consider sentences like (7b-c). In most contexts, the BNP subject of (7b) is interpreted as an indefinite NP that introduces a referent. But in the other contexts it may be interpreted definitely. When the hearer expects a student who the speaker knows to visit him, the speaker reports the arrival of that student by making an utterance like (7b). In (7c) where two BNPs are contrastively topic-marked, they are interpreted either definitely or indefinitely, depending on the context of use. The sentences in (8) illustrate the generic use of BNPs. The BNPs in (8) differ from the ones in (7) in that their unmarked interpretation does not make reference to a specific individual or have an existential force. They are usually assigned (quasi-) universal readings.

In the above I illustrated the three possible interpretations of BNPs in Korean. I also noticed that there are four major types of predication in Korean. The topic-marked NP is used to convey theme presentation or
contrastiveness, and the nominative-marked NP gives rise to the neutral
description or exhaustive listing readings. Recent works on genericity such
as Carlson (1977), Kratzer (1989), Wilkinson (1986) etc. assume the clas­
sification of predicates and focus on their semantic contribution to the in­
terpretation of BNPs. Three major types of predicates are identified, and
they are stage-level predicates like hungry, individual-level predicates like smart, and kind-level predicates like common. Carlson (1977) argues that
the distinction among stage-level, object-level and kind-level predicates
plays a crucial role in disambiguating the readings of English bare plurals.
The distinction between stage-level and individual-level predicates is popu­
larized again by recent tripartite quantificational analyses like Diesing
(1988) and Kratzer (1989). Given this, it would be a reasonable question
to ask if there is a correlation or dependency among the interpretation of
BNPs, the types of predication, and the types of predicates.

Before we answer the above question, we should examine which combina­
tions of these three elements are possible and which combinations are not.

(9) Quantification Types of Predication     Types of Predicate
    Definite(Def) Theme Presentation(TP) Stage-Level Predicate(SLP)
    Indefinite(Ind) Contrastiveness(Con) Individual-Level Predicate(ILP)
    Generic(Gen) Neutral Description(ND) Kind-Level Predicate(KLP)
          Exhaustive Listing(EL)

There are 36 logically possible combinations. However, as will be seen
below, many of them are in fact semantically anomalous.

(10) a. Keci-nun chwuwehanta. (Def+TP+SLP)  
      the beggar-TOP (is) cold
      ‘As for the beggar, he is cold.’

     b. Haksayng-un cengcikhata. (Def+TP+ILP)  
      the student-TOP (is) honest
      ‘As for the student, he is honest.’
     c. *Haksayng-un hunhata. (Def+TP+KLP)  
      the-student-TOP (is) common
      ‘As for the student, he is common.’

(11) a. Keci-nun chwuwehanta. (Def+Con+SLP)  
      ‘The beggar is cold, but someone else may be not.’
b. Haksayng-un cengcikhata. (Def + Con + ILP)
   'The student is honest, but someone else may be not.'

c. *Haksayng-un hunhata. (Def + Con + KLP)
   'The student is common, but someone else may be not.'

(12) a. Keci-ka chwuwehanta. (Def + ND + SLP)
   'The beggar is cold.'

b. *Haksayng-i cengcikhata. (Def + ND + ILP)
   'The student is honest.'

c. *Haksayng-i hunhata. (Def + ND + KLP)
   'The student is common.'

(13) a. Keci-ka chwuwehanta. (Def + EL + SLP)
   'It is the beggar that is cold.'

b. Haksayng-i cengcikhata. (Def + EL + ILP)
   'It is the student that is honest.'

c. *Haksayng-i hunhata. (Def + EL + KLP)
   'It is the student that is common.'

(14) a. *Keci-nun chwuwehanta. (Ind + TP + SLP)
   'As for some beggars, they are cold.'

b. *Haksayng-un cengcikhata. (Ind + TP + ILP)
   'As for some students, they are honest.'

c. *Haksayng-un hunhata. (Ind + TP + KLP)
   'As for some students, they are common.'

(15) a. Keci-nun chwuwehanta. (Ind + Con + SLP) — ambiguous, generic

O. K.
   'Some beggars are cold, but someone else may be not.'

b. *Haksayng-un cengcikhata. (Ind + Con + ILP)
   'Some students are honest, but someone else may be not.'

c. *Haksayng-un hunhata. (Ind + Con + KLP)
   'Some students are common, but someone else may be not.'

(16) a. Keci-ka chwuwehanta. (Ind + ND + SLP)
   'Some beggars are cold.'

b. *Haksayng-i cengcikhata. (Ind + ND + ILP)
   'Some students are honest.'

c. *Haksayng-i hunhata. (Ind + ND + KLP)
   'Some students are common.'
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(17) a. ?Keci-ka chwuwehanta. (Ind+EL+SLP)
   'It is some beggars that are cold.'
b. *Haksayng-i cengcikhata. (Ind+EL+ILP)
   'It is some students that are honest.'
c. *Haksayng-i hunhata. (Ind+EL+KLP)
   'It is some students that are common.'

(18) a. Keci-nun chwuwehanta. (Gen+TP+SLP)
   'As for beggars, they are cold.'
b. Haksayng-un cengcikhata. (Gen+TP+ILP)
   'As for students, they are honest.'
c. Haksayng-un hunhata. (Gen+TP+KLP)
   'As for students, they are common.'

(19) a. Keci-nun chwuwehanta. (Gen+Con+SLP)
   'Beggars are cold, but some other kind of people may be not.'
b. Haksayng-un cengcikhata. (Gen+Con+ILP)
   'Students are honest but some other kind of people may be not.'
c. Haksayng-un hunhata. (Gen+Con+KLP)
   'Students are common, but some other kind of people may be not.'

(20) a. ?*Keci-ka chwuwehanta. (Gen+ND+SLP)
   'Beggar are cold.'
b. ?*Haksayng-i cengcikhata. (Gen+ND+ILP)
   'Students are honest.'
c. *Haksayng-i hunhata. (Gen+ND+KLP)
   'Students are common.'

(21) a. Keci-ka chwuwehanta. (Gen+EL+SLP)
   'It is beggars that are cold.'
b. Haksayng-i cengcikhata. (Gen+EL+ILP)
   'It is students that are honest.'
c. Haksayng-i hunhata. (Gen+EL+KLP)
   'It is students that are common.'

A careful examination of the above paradigm leads to the following descriptive generalizations:

(22) The ungrammaticality of the (c) sentences of (10)-(13), and (14) -(17) simply reflects the property of kind-level predicates, namely,
the property that they can be predicated only of the BNPs that denote classes of individuals.

(23) The ungrammaticality of the (b) sentences of (14)-(17) shows that individual-level predicates are incompatible with the BNPs that are interpreted existentially.\(^5\)

(24) The ungrammaticality of the (b) sentences of (12), (16) and (20) is due to the constraint that individual-level predicates cannot be used in the neutral description sentence.\(^6\)

(25) The ungrammaticality of (20a-c) suggests that generically interpreted BNPs are not compatible with the neutral description sentence.

(26) The ungrammaticality of (14a-c) is due to the constraint that existentially interpreted BNPs cannot be thematically topic-marked.

From (22), (24) and (25), it follows that typical neutral description sentences take a definite or indefinite subject NP followed by a stage-level predicate. Whether the BNPs in the other predications are interpreted generically or not is dependent on the context of use unless kind-level predicates are used. Thematically topic-marked BNPs refer to contextually determined unique individuals or kinds regardless of whether stage-level or individual-level predicates are used. When contrastively topic-marked BNPs or exhaustively focused BNPs are followed by individual-level predicates, they are interpreted definitely or generically. When they are predicated by stage-level predicates, they are interpreted definitely, indefinitely or generically.

In sum, the availability of the generic interpretation of a BNP in Korean is NOT subject to the distinction between stage-level and individual-level predicates. This seems to give evidence for the view that the generic interpretations associated with topic-marked and exhaustively focused BNPs are nominal-oriented. Why they should be so is what I will discuss in the next section.

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\(^{5}\) This may be implemented by Milsark’s (1974) Predicate Condition which blocks individual-level predicates from being predicated of weak NPs. For example, *Two men are bold* is ungrammatical unless *two men* receives a proportional or contrastive interpretation.

3. Accommodation and the Identity Relation

The reason why the generic interpretations involved in topic-marked or exhaustively focused BNPs are nominal-oriented comes partly from their linguistic properties and partly from the properties of the relevant constructions.

First of all, these generically interpretable BNPs are ambiguous between definite individual and kind denotations in any of the constructions. In this respect, they are in contrast with English bare plurals that are interpreted existentially or generically. Handling certain cases of the latter in terms of the tripartite quantificational structure, Kratzer (1989) notes that a variable introduced by a definite NP, but not a variable introduced by an indefinite NP, can receive a value from the context of use, and thus Firemen are altruistic cannot mean that some contextually specified firemen are altruistic. The contrast noted suggests that the semantic interpretation of Korean BNPs should be different from that of English bare plurals. Note that Heim/Diesing/Kratzer’s tripartite quantificational analysis treats these plurals as variable-introducing predicates. It is natural to think of the generics handled by the tripartite quantificational analysis as case-oriented rather than as nominal-oriented.

A careful reader may have noticed, in the discussion of topic constructions, that generic terms are on a par with other definite NPs with respect to topic-marking. This suggests that when they are (thematically) topic-marked, they are subject to the condition that they must be anaphorically related to a previously introduced discourse referent unless accommodation occurs. With this in mind, let us consider (27).


‘John bought a book yesterday. Books are very useful to men.’

The topic-marked BNP of the second clause of (27) does not seem to refer to a contextually specified book, i.e. the book that John bought yesterday, but the set or fusion of all realizations of books. If an anaphoric relation requires that anaphorically related objects be identical, no anaphoric relation holds between the referents denoted by the two occurrences of chayk ‘book’. Nonetheless, an utterance such as (27) is so natural that we cannot imag-
ine that any kind of accommodation is involved. It seems that an anaphoric relation holds between the two referents in a somewhat weak sense, or an accommodation takes place so spontaneously with the utterance. Either is a plausible explanation of why (27) forms a natural piece of discourse. Note, however, that what enables us to regard the two referents as identical is the same thing that allows spontaneous accommodation to occur in case no anaphoric relation is assumed. What is it, then? It appears to be in our ontology. It is the relation in (28), EQU, which equates kinds, their individual–level or stage–level realizations, and sums of these realizations.

(28) Given three sorts of entities, kinds, individuals, and stages and Carlson’s (1977) two-place relations R and R', \( \forall x, y [EQU(x, y) \leftrightarrow (x=y) \lor R(x, y) \lor R'(x, y) \lor SUM(x, y)] \), where = is an ordinary equality.

According to this ontological relation, the kind books is viewed as identical as its single realizations or any sums of books.

In the above, I argued that the discourse referent of the topic–marked NP in (27) is not its spatio–temporal slice, but a fusion of such slices that is independent from the specific spatio-temporal points. Given this and the identity relation in (28), the first use of chayk ‘book’ would introduce the following into the common background of conversation:

(29) The discourse referent introduced by chayk ‘book'
The big circle represents the kind books, and consists of an indefinite number of small circles like $R_1$, $R_2$, etc. These circles stand for its realizations that are spatio-temporally unbound. It should be kept in mind that these realizations are NOT spatio-temporal slices of any single book. They are individual books. Circle $R_3$ represents a contextually specific individual book. Whether the second use of chayk in (27) refers to this specific instantiation or the kind of which it is an instantiation is determined by pragmatic or contextual factors. Propositions like $P_4$ hold for the kind books, not just for its realizations. This means that they are denoted by the sentences that contain a kind-level predicate. When propositions that hold for their associated realizations are exactly the same except that they are predicated of different realizations, generic interpretations are obtained. Linguistic expressions are not so sophisticated as to distinguish such propositions.

In sum, the fact that generically interpretable BNPs are also interpretable as definite NPs and the presence of natural pieces of discourse such as (27) support the view that their generic interpretations are nominal-oriented. In the next section, I will discuss how these generic interpretations are represented.

4. Nominal-Oriented Generics

The most crucial property of nominal-oriented generics is that generically interpreted BNPs are proper names of kinds. Carlson (1977) argues that English bare plurals are proper names of kinds. Wilkinson (1986), Krifka (1987), Diesing (1988), and Kratzer (1989) treat them as predicates that introduce a variable in the restrictive clause of the tripartite quantificational structure.7 Relying on Krifka’s distinction between I-generics and D-generics, Zwarts (1990) claims that definite generic NPs like the panda of (30) below are essentially proper names of kinds, and bare plural generic NPs are variables over plural objects.

(30) a. The panda is almost extinct.
    b. The panda is small.

7 Although Krifka claims that English bare plurals are ambiguous between I-generics and D-generics, he treats these two generics alike by Kamp/Heim’s unselective variable-binding.
Whether the English bare plurals are proper names for kinds or variable-introducing predicates, or any other objects are not our concern. The interesting point that deserves consideration is the fact that the definite generics of English has a common property with the nominal-oriented generics of Korean. Unless assigned a generic interpretation, they both serve to denote contextually determined individuals. This is the most fundamental difference between them and the English bare plurals. Following Krifka (1987), Zwarts (1990) cites the following contrasts between definite generics and bare plural generics:

(31) a. ?The lion with three legs is ferocious.
   b. Lions with three legs are ferocious.
   c. Sey pal talli-n saca-nun sanapta.
      three legs have-that lion-TOP ferocious
      ‘The lion/Lions with three legs is/are ferocious.’

   b. Spies meet in the dark.
   c. Kanchep-un etwum sok-eyse mannanta.
      spy-TOP dark inside-in meet
      ‘The spy/Spies meets/meet in the dark.’

(33) a. The Sumerians invented the pottery wheel.
   b. ?The Sumerians invented pottery wheels.
   c. Toki noklotay-nun swumeyliain-i palmyenghayessta.
      potter wheel-TOP the Sumerians-NOM invented
      ‘The potter wheel/Potter wheels, Sumerians invented.’

According to Krifka, definite generics should denote a well-established kind, and hence the deviance of (31a) results. He also notes that the objects of dynamic verbs like invent should be definite generics, but not a bare plural generics. Hence (33b) is marginal. Zwarts claims that collective predicates like meet cannot be predicated of a definite generics, but a bare plural generics. Thus the marginality of (32a) results. If we consider (31c) and (32c), we can see that they are as natural as (31b) and (32b). This fact appears to suggest that Korean BNPs are on a par with English bare plurals. However, the contrast between (33a) and (33c) on the one hand and (33b) on the other suggests that they are on a par with the English definite generics. Note that the contrast between the (a) sentences of (31)-
(32) and their corresponding (c) sentences does not really undermine our claim that the nominal-oriented generic NPs in Korean behave like the definite generic NPs in English. As for sentences like (31a), Zwarts (1990) notes that they become fully acceptable when accommodation occurs. That is, given the previous introduction, explicit or implicit, of the lion with three legs as a particular kind of lion, an utterance like (31a) becomes possible. If this is correct, we may attribute the fully acceptable (31c) to the fact that the effect of accommodation is in a full swing in Korean. Accordingly, a previous talk about a lion may suffice to allow the lion with three legs to be generically interpreted without difficulty.

If the contrast between (32a) and (32b) is due to the grammatical number agreement whose effect is generally absent in Korean, it is no longer a counterexample to our claim. There seems to be more convincing evidence in support of our claim. Let us consider the following sentences and their interpretations:

(34) a. Firemen are altruistic.
    b. Sopangwu-nun hensincekita.
       the fireman-TOP (is) altruistic
       ‘The fireman is altruistic.’

(35) a. \( \exists x [\text{fireman}(x) [\text{altruistic}(x)]] \)
    b. \( \exists x [\text{fireman}(x) \land \text{altruistic}(x)] \)

(36) a. Firemen are cold.
    b. Sopangswu-nun chwuwehanta.
       the fireman-TOP (is) cold
       ‘The fireman is cold.’

(37) a. \( \exists x, I [\text{fireman}(x) \land \text{cold}(x, I)] \)
    b. \( GI[\text{here}(I)] \exists x [\text{fireman}(x) \land \text{cold}(x, I)] \)
    c. \( Gx, I [\text{fireman}(x) \land \text{be}(x, I)] \text{cold}(x) \)

Sentence (34a) and its Korean counterpart (34b) are unambiguously interpreted as (35a), which says that a fireman is typically altruistic. They never receive an interpretation like (35b), which means that there is an altruistic fireman. Diesing (1988) and Kratzer (1989) argue that individual-level predicates like altruistic have a VP-external subject and the material which is outside of VP should map to the restrictive clause of the tripartite logical form. This guarantees that no existential interpretation is available for sentences like (34a–b). However, this is not the only account
of why they fail to receive an existential interpretation. Recall Milsark's (1974) Predicate Condition, which says that individual-level predicates cannot be predicated of weak NPs. Unlike quantified expressions, which can be treated as strong NPs when they receive a proportional or contrastive interpretation, existentially interpreted BNP{s} are always treated as weak NPs. Neither the proportional or contrastive interpretation is available for them. Therefore there is no way to assign an existential interpretation to them. According to Diesing and Kratzer analyses, sentence (36a) is three ways ambiguous, as shown in (37). It means that there are firemen cold, as in (37a), or that there are typically firemen cold around here, as in (37b), or that it is a characteristic property of a fireman that he is cold, as in (37c). Among these interpretations, (37a) is the most prominent, since it is the interpretation that is always possible, and the others are subject to pragmatic considerations. As Diesing notes, they disappear in many cases. Consider sentence (36b), the Korean example corresponding to (36a). Interestingly, it does not have the interpretations in (37a-b), but the interpretation in (37c). What does this fact suggest? It simply shows that Diesing/Kratzer's quantificational analysis on the basis of the distinction between individual-level and stage-level predicates fails to represent the correct interpretation of the Korean BNP the referent of which the sentence is about. The correct interpretation should be based on the consideration of whether the property of a predicate holds of an individual realization of the kind it denotes. This is why they are called nominal-oriented generics.

In order to avoid an unnecessary misinterpretation of the present claim, some words are in order here. It is well-known that generics allows exceptions in most contexts. Such exceptions involved in generics have motivated the default quantificational analysis. On this analysis, for example, if something satisfies the description of a generically interpreted subject NP, one may conclude that it also has the property denoted by its predicate, UNLESS THERE IS SOME UNKNOWN FACT THAT BLOCKS THIS CONCLUSION. According to this, generic sentences are statements about normal, typical instances. Link (1988) defines the class of such normal instances as Homogeneous Recognizable Subclass (HRS). The HRS is designed to ignore all idiosyncrasies and to encode the pragmatic effects that restrict the application of generics to some recognizable subclass, present in the real world or not. I have proposed that the correct interpretation of nominal-oriented
generics be based on the consideration of whether the property of a predicate holds of an individual realization of the kind it denotes. I do not mean, however, that we have to check this with each individual realization. Given a notion like HRS, we only need to check whether the property of a predicate holds of all individual realizations belonging to the HRS of the kind in question.

Now we are in a position to present the semantic representations of nominal-oriented generic sentences. Let us begin with sentence (8c), represented as (38).

(38) Radio-nun hunhata.
    radios-TOP (are)common
    'Radios are common.'

A sentence like (38) is a generic statement about a kind and said to involve what Link (1988) calls proper kind predication. (38) is uttered to make a singular statement about the kind radios. Recall that topic constructions are interpreted in terms of the implicational structure in (5), repeated as (39a) below. Given this, the semantic representation of (38) would be represented as (39b).

(39) a. \[ \exists Q \forall P \,[P \text{ is true of } T](Q) \Rightarrow R \text{ is true of } T \]
b. \[ \exists Q \forall P \,[P \text{ is true of the kind radios}](Q) \Rightarrow \text{The kind radios is common} \]

Note that there are two sorts of entities, kinds and individuals, in our ontology. Together with the context variable, Con Var, omitted from the antecedent of (39a), the meaning of common would guarantee the property of being common to be predicated of the whole kind. This is how proper kind predication is derived.

Let us now consider sentences (34b) and (36b), which involve what Link (1988) calls derived kind predication. Unlike (38), they are used to make general statements about a certain class of objects. I argued that the ontological relation, the identity relation in (28), enables us to view a kind and its individual realizations or any sums of these realizations as identical. That is, we identify any individual fireman with the kind firemen. Consider the following implicational representation of (34b):

\[ \exists Q \forall P \,[P \text{ is true of the kind radios}](Q) \Rightarrow \text{The kind radios is common} \]
The implicational representation in (40) seems inadequate for some reasons. First, it postulates the application of the individual-level predicate be altruistic to the kind firemen. Second, the representation itself allows no exceptions. We need a more sophisticated implicational structure for derived kind predication. A solution to these problems lies in the fact that the property of being altruistic applies to individual members of the HRS of the kind firemen. Link (1988) argues that an appropriate HRS is always inferred from grammatical, lexical, contextual and/or other pragmatic information. This means that whenever an utterance like (34b) is made, the property of being altruistic applies only to typical individual firemen. This allows the possibility that some firemen are not altruistic. Note that the use of HRS is possible only when the identity relation in (36) is assumed to exist. Then (34b) would be assigned to (41).

\[(41) \quad \exists Q \, (P \text{ is true of all individual members of the HRS of the kind firemen}) \quad \rightarrow \quad \text{Those members are altruistic}\]

As Link argues, the antecedent and the conclusion of (41) should be interpreted as event-types, not just as specific reference events with respect to which every event type is evaluated. This is because the property of being altruistic is predicated of spatiotemporally unbounded individual firemen.

Given the mechanisms introduced so far, sentence (36b) would be assigned to (42).

\[(42) \quad \exists Q \, (P \text{ is true of all individual members of the HRS of the kind firemen}) \quad \rightarrow \quad \text{Those members are cold}\]

A problem arises immediately in (42). Here we are forced to predicate a stage-level predicate like be cold of an individual-level entity — a counterintuitive move. It is obvious that we should maintain our analysis of nominal-oriented generics when we consider the following artificial situation. Suppose that the kind firemen consists of John, Mary, Bill, and Sue. Suppose further that John, Mary, Bill, and Sue felt cold 10, 10, 8, and 2 times, respectively, but did not feel cold, 2, 2, 2, and 30 times, respectively. There are, in principle, 30 occasions where at least one of them could feel cold,
but the maximal number of occasions where none of them could feel cold can be 36. Even in this situation, sentence (36b) seems to be true. In the opposite situation where John, Mary, Bill, and Sue felt cold 2, 2, 2, and 30 times, respectively, but did not feel cold, 10, 10, 8, and 2 times, respectively, sentence (36b) is false. A possible solution comes into mind. The reference event \( e_1 \) with respect to which the event type of the conclusion is evaluated should be an event type which is evaluated with respect to the reference event \( e_0 \) of different sort which is bound to the individual that satisfies the reference event \( e_0 \) of the antecedent of (42). This means that the conclusion of (42) should be represented by another implicational structure. The semantic properties of stage-level predicates and topic constructions introduce two different types of HRSs. One of them goes to the antecedent of the main implicational structure, and the other, to the antecedent of the implicational structure of the conclusion. Given this, (42) would be replaced with the implicational structure in (43).

\[
(43) \quad \exists Q \forall P[P \text{ is true of all individual members of the HRS of the kind firemen}] (Q) \quad \text{if} \quad \exists W \forall X[X \text{ is true of all spatio-temporal realizations of individual members of the HRS}' \text{ of the set of spatio-temporal realizations of all individual members of the HRS of the kind firemen}] (W) \quad \text{if} \quad \text{Those realizations are cold} \quad \text{if} \quad \text{W}]
\]

The HRS in the main antecedent consists of normal individual firemen who usually feel cold. The HRS' in the antecedent of the implicational structure of the conclusion is a set of normal spatio-temporal realizations of the normal firemen who constitute the HRS. The entire implication says that all normal firemen usually feel cold.

The semantic representation of generics via the identity relation and the notion of HRS also turns out useful in dealing with a sentence like (32c), repeated as (44).

\[
(44) \quad \text{Kanchep-un etwum sok-eyse mannanta.}
\]
\[
\text{spy-TOP dark inside-in meet}
\]

'Spies meet in the dark.'

On our analysis, (44) would be assigned to the implicational structure in (45).
(45) \( \exists Q \forall P \left[ P \text{ is true of any sums of individual members of the HRS of the kind spies} \right](Q) \rightarrow M \)

Note that a predicate like *meet in the dark* is a collective predicate and requires its subject NP to denote a plural object. According to this requirement, the property of meeting in the dark must be predicated of any sum of normal spies who meet in the dark. Again, this is possible only if the identity relation in (36) is assumed.

5. Concluding Remarks

In this paper I argued that (thematic ally) topic-marked BNPs and exhaustively focused BNPs are nominal-oriented generics and thus are proper names of kinds. I then showed how to represent various cases of nominal-oriented generics — proper and derived kind predications— in terms of the implicational logical structure which incorporates the notion Homogeneous Recognizable Subclass introduced by Link (1988) and the identity relation that equates kinds, their individual-level or stage-level realizations, and sums of these realizations.

Before closing the paper, I would like to make a final remark on genericity. As we shall see, there is another way of expressing genericity in Korean. I claim that this involves case-oriented generics rather than nominal-oriented generics. Consider (46).

   dogs-TOP morning late bark—but roosters early crow
   'There are typically dogs barking late in the morning, but there are typically roosters crowing early in the morning.'

b. (Kywul-ey-nun nwun-i manhi onta.) Keci-ka cwuwehanta.
   winter-in-TOP snow-NOM much come beggars-NOM (are)cold
   '(In the winter, it snows a lot.) There are typically beggars cold around here.'

(46a) is a topic construction that conveys contrastiveness, and (46b) is a neutral description. As shown by their translations, the sentences may receive a dispositional generic interpretation besides a nominal-oriented generic interpretation. Note that contrastive topic-marking is possible even
with BNPs interpreted existentially. Nothing blocks the nominative-marked BNP subject of a neutral description from having an existential force. Some discourse factors enable a sentence like (46b) to be a generic statement. For example, if the topic of the previous discourse is what happens when it snows a lot in the winter, it is quite natural to interpret (46b) as a generic statement.⁸

I would like to suggest that the generic interpretations of the above sentences be treated differently from the nominal-oriented generic interpretations. Our treatment of the latter is inappropriate for those sentences since the BNP subjects in question do not refer to kinds. An existential quantification is always involved in the analysis of these NPs. Let us consider the following representations.

(47) a. \( \exists x, I[\text{beggar}(x) \& \text{cold}(x, I)] \)

b. \( G![[\text{here}(I)] \exists x[\text{beggar}(x) \& \text{cold}(x, I)]] \)

c. \( Gx, I[\text{beggar}(x) \& \text{be}(x, I)] \exists \text{cold}(x) \]

The nongeneric existential interpretation of (46b) is represented as (47a), and the dispositional generic interpretation, as (47b). The generic reading in (47c), which says that the characteristic property of a beggar is that he is cold, is impossible. It seems that Heim/Diesing/Kratzer's quantificational analysis predicts too many readings. An interpretation like (47c) is derived only if (46b) is a case of nominal-oriented generics. I claim that the interpretation in (47b) is obtained when the proposition on the nongeneric existential reading is unbound to a specific spatio-temporal point. In spite of this clear intuition, it is not obvious at all how to represent it formally. I will leave it to future work.

Note finally that such cases of case-oriented generics are very rare and require very restricted contexts. This and the relative poverty of neutral description sentences result in the predominant use of nominal-oriented generics, especially by topic constructions. This may, in turn, be closely related to the property of Korean that it is a topic-oriented language, but not a subject-oriented one.

⁸ See Carlson (1989) for discussion of English examples of this sort.
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