

**On the Presence vs. Absence of the Uniqueness of Reference  
Associated with the Definite Article in English \***

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**1. Introduction**

In this paper I will discuss some aspects of the definite NPs which are formally singular, but semantically related to plural referents. I will call this relation between an NP and the objects referred to by the NP the one-to-many correspondence. The one-to-many correspondence that I am going to discuss is clearly understood by the following example provided by Lambrecht (1994:90):

(1) Every time I go to the clinic the doctor is someone different.

This is a good example which illustrates the case in point. In (1) there is certainly one doctor for each time that the speaker of the sentence goes to the clinic, but the doctor is selected from the doctors who work for the clinic. The scope of a singular NP therefore extends over the group of the doctors who work for the clinic on condition that only one of them plays the role of *the doctor whom the speaker sees* at one time. To adopt the analysis developed in the next section, the definite NP contains a variable, and one value after another fills the variable. In (1) thus it is asserted that one doctor replaces another on each occasion the speaker goes to the clinic.

Consider further the following example in which the same analysis as above can carry over to the definite NP *the surgeon*:

(2) The treatment plan in many hospitals depends on the surgeon.

Like *the doctor* in (1), the definite NP *the surgeon* does not pick out one particular surgeon. This sentence is interpreted as meaning that the treatment plan changes as the person who plays the role of surgeon changes. This interpretation is available only if the definite NP involves a variable, as closely paraphrased as 'who the surgeon is', and stands for the group of contextually relevant surgeons.

In these examples, the singular NP has bearing on plural objects in that it stands for a group to which the relevant plural referents belong. Since it extends over plural objects, the definite NP does not carry the uniqueness of reference. I will compare definite NPs which carry the uniqueness of reference with definite NPs which do not. I will thus analyze how and when a definite singular NP can suppress the uniqueness of reference and have a positive bearing on plural objects. Besides definite NPs of the type exemplified by (1) and (2), we will examine definite NPs in sporadic reference use such as the one in (3a) and those in generic use such as the one in (3b):

- (3) a. [Hotel concierge to guest, in a lobby with four elevators] You're in Room 611. Take the elevator to the sixth floor and turn left.

(Birner and Ward (1994:93))

- b. The tiger is becoming almost extinct.

In (3a), the singular NP is employed in a context where there are plural objects to be described by that NP. In (3b), the singular NP stands for a kind which is constituted by an indefinitely large number of tigers. Although these definite NPs in (3) are qualitatively different from those in (1) and (2), there is one thing common to all of them. It is the one-to-many correspondence.

I will argue that the one-to-many correspondence indicates grammatically marked aspects expressed by definite NPs. As Huddleston (1984:chapter 11) and Sadock and Zwicky (1985) demonstrate, clauses reflect speech act distinctions by means of clause types -- interrogative clauses reflect the speech act of question or declarative clauses reflect the speech act of statement. In this paper, I will argue that definite NPs can reflect similar distinctions by means of their referential properties, too. Here by 'clause type' I mean the regular association of the form of a clause and the way it is used. Given that a declarative clause which depicts a specific situation qualifies as an unmarked category, it follows that other clause types which do not depict such a situation form marked categories. These include interrogative clauses, habitual sentences, and generic sentences. The one-to-many correspondence shown by definite NPs will be analyzed in comparison to these marked clause types.

This paper is organized as follows. In section 2, we discuss grammatical properties of concealed questions in order to show the relation between the marked clause type of *wh*-interrogative and referential properties of some definite NPs. Section 3 illustrates the role of the uniqueness of reference in the use of a definite NP. I will there point out that there are several conditions involved in a successful reference by means of a definite NP. Section 4 presents some factors which weaken the conditions for the uniqueness of reference. In section 5 we see that the notion of the undifferentiatedness of multiple referents is responsible for definite NPs in "non-referential" use. I will there propose the grouping function of the definite article, which is designed to capture the relation between marked clause types and "non-referential" definite NPs. In section 6 we discuss the relation between definite NPs in sporadic reference use and habitual sentences. It will be shown that the marked clause type reflected in habitual sentences plays a key role in bringing about the sporadic reference use. From a similar perspective, we focus on generic NPs in section 7. Section 8 concludes this paper.

## 2. Concealed Questions

We will begin with an analysis of definite NPs which are semantically equivalent to variable-questions. Such definite NPs are called concealed questions (cf. Grimshaw (1977)). For example, the definite NP in (4a) is interpreted as being equivalent to, and paraphraseable by, the *wh*-interrogative in brackets.

(4) a. I can't remember the kind of pizza she likes (what kind of pizza she likes).

b. I don't like the kind of pizza she likes. Huddleston (1994:431)

Notice that concealed questions are interpreted as such only when they occur with the predicates which can take *wh*-interrogative complement clauses. The difference between *like* and *remember* illustrates this. As Huddleston points out, while the definite NP in (4a) has the question-like interpretation, the definite NP in (4b) is a simple referring expression and is not interpreted in this way. Unlike *remember*, *like* is not a predicate which takes a *wh*-interrogative complement clause.

Fukuchi (1995) argues that concealed questions are not merely a matter of the interpretation assigned to certain combinations of predicates and their complement NPs. They have syntactic correlates. Fukuchi (1995:49) shows that the syntactic category of concealed questions is NP, but concealed questions can be coordinated with *wh*-interrogative clauses, as in:

(5) It is not surprising that disagreements arise among us -- over the kind of ship to need, how it should be equipped, and above all what route to take.

This coordination across categories suggests a close semantic affinity of definite NPs as concealed questions with *wh*-interrogatives.

As is well known, the definite NP in question is semantically comparable to an embedded *wh*-interrogative clause. Consider the following facts.

(6) a. John knows who came to the party, #but he doesn't know that Mary came.

b. John knows that some people came to the party, but he doesn't know that Mary came.

c. John knows the people that came to the party, #but he doesn't know that Mary came.

When *know* takes a *wh*-interrogative complement clause, as in (6a), it is implied that John exhaustively knows the answers to the question carried by the clause. It is thus odd to add to the sentence another sentence which denies the exhaustiveness of the known answers. When *know* takes a declarative complement, on the other hand, there is no implication as to the exhaustiveness, and it is possible to add such a sentence, as in (6b). When a definite NP occurs in the complement position of *know*,

the continuation with that sentence is again inappropriate, as in (6c). These facts support the view that definite NPs in this position are semantically equivalent to what are called variable questions. See note 1 for further syntactic correlates.

It is true that the kind of predicates provides a criterion for determining whether the complement NP is interpreted as a referring expression or as a concealed question, but the definite article also plays an important role in forming the NP as a concealed question. Grimshaw (1977:153) points out that *find out* is a predicate that induces the concealed question reading of the NP in its complement position, and the NP must be definite:

(7) Bill found out {\*a/the} name he'd been trying to recall for weeks.

This suggests that the definite article has some capacity which the indefinite article does not have. In the present discussion, this contrast leads us to say that the definite article can determine an NP to express a question-like meaning, which the indefinite article cannot. In what follows I will concentrate on this capacity of the definite article which has to do with the question-like meaning, and, as I will further argue, with the one-to-many correspondence.

### 2.1. Variable Questions

I suggest that the semantic property of *the* used in concealed questions sheds light on the one-to-many correspondence in (1) and (2). Before describing the relation between definiteness and question, let us discuss the kinds of questions. Following Huddleston (1994), we assume three kinds of questions:

- (8) a. Are you ready? [polar question]  
 b. Is it a boy or a girl? [alternative question]  
 c. Whose hat is this? [variable question]

The first kind of polar question is a question that can be answered by either *Yes* or *No*. The second kind of alternative question is a question which contains the answer in itself: the answer is either of the conjoined phrases.

The third kind of variable question is directly relevant to our interest. It has the semantic characteristic of expressing a propositional content involving a variable. A value or answer if successful fills the variable to form a proposition. It is noteworthy that the variable can be filled by different values. In (8c), for instance, possible answers include *This hat is John's*, *This hat is Mike's*, *This hat is Robyne's*, and so forth. This shows that although a variable is not a referring expression, it has a strong connection with referring expressions in that it presupposes a group in which referring expressions which qualify as values for it are listed. An expression involving a variable requires the presence of a group which contains possible values, but it does not pick out a particular value from the group.

It is important that a variable involved in a *wh*-interrogative can be filled by a set of different values. The following example comes from Seki (1996:136-137):

- (9) 'What would you like?' He was smiling broadly. 'Coffee? Cognac? Bacon and Eggs?'

As Seki (1996) illustrates with a number of similar examples, *wh*-interrogatives can be followed by a set of pragmatically relevant expressions which the speaker presents as candidates for the correct value for the variable. This fact strongly indicates that the variable expressed in a *wh*-interrogative is open to a set of pragmatically relevant referents rather than confined to a unique unknown entity.

Variable questions have much to do with specificational sentences, because a specificational sentence basically consists of a subject NP which qualifies as a variable and a complement NP which qualifies as a value for that variable. In short, a specificational sentence embodies a question-and-answer pair. In support of this characterization, Declerck (1988:7) cites the parallelism in coindexation between question-and-answer pairs and pseudo-clefts, a formal variant of specificational sentences. Consider the contrast between (10) and (11):

- (10) A: What did John<sub>i</sub> sell?

B: His<sub>i</sub> house.

- (11) A: What did he<sub>i</sub> sell?

B: \*John's<sub>i</sub> house.

As this contrast shows, coindexation needs to be marked from the variable to the value in principle. The same restriction applies to pseudo-clefts, as in (12):

- (12) a. What John<sub>i</sub> sold was his<sub>i</sub> house.

b. \*What he<sub>i</sub> sold was John's<sub>i</sub> house.

These parallels in distribution demonstrate that the grammar of specificational sentences is described in terms of the value-for-variable relation, and that the subject NP of a specificational sentence is equivalent to a concealed question.

In Nishida (1996), I have argued that one of the distinctive characteristics of specificational sentences is that they allow number discord of the form  $NP_{(sg.)}$  *is*  $NP_{(pl.)}$ . For example:

- (13) a. The best part of the show was the acrobats.

b. The result of this marriage was four children.

In these sentences, the subject NP contains a variable and the complement NP qualifies as the value which fills the variable. Notice that there is a one-to-many correspondence between the NP involving a variable and the NP which refers to plural objects and are formally plural.

Similarly, pseudo-clefts allow number discord. Consider the sentence in (14a)

and its paraphrase in (14b) offered by Higgins (1979:154).

- (14) a. What I bought was a punnet of strawberries and a pint of clotted cream.  
 b. I bought the following things: a punnet of strawberries and a pint of clotted cream.

The NP equivalent of *what I bought* is singular in number and the copula agrees with it in the singular form of *was*. The post copular NP refers to the plural entities.

In pseudo-clefts like (14a), *what I bought* is singular not because it refers to a single entity, but because it stands for the heading of some list. As the paraphrase in (14b) shows, *what I bought* is equivalent to the heading of a list, a list of the things I bought, for example. Such NPs are what Higgins (1979) calls "superscriptional NPs". In this section, I will argue that Higgins' idea of superscriptional NPs should be generalized to a grammatical property of the definite article.

It is now clear that the one-to-many correspondence may be licensed when the marked clause type for question is expressed via a definite NP. I will speak of the *mode* of a definite NP when there is a regular association between a set of marked referential properties of a definite NP and the way it is used. For example, a definite NP falls in the mode of question when it qualifies as the heading of a list. In specificational sentences, the scope of a singular NP may extend over plural objects, because it expresses the marked mode of variable-question in which reference to a particular object cannot be made. Definite singular NPs in this mode serve to put some different objects in a group. A singular NP in superscriptional use, thus, can stand for plural objects in spite of its singularity in grammatical number.

## 2. 2. Keenan's (1975) Account of Concealed Questions

Keenan (1975) once suggested a solution for the equivalence in meaning between embedded *wh*-interrogative clauses and concealed questions, which are formally definite NPs. Consider the following pair:

- (15) a. John knows the route the plane will take.  
 b. John knows which route the plane will take.

Keenan's account of the equivalence between (15a) and (15b) is developed in two steps. He exploits the grammatical property of the definite article and its relation to the predicate in his account.

First, given that a variable-question presupposes a true answer, it follows that an NP will be a true answer to the question conveyed by a *wh*-interrogative just in case it is interpreted as being referential to a unique entity of which the propositional content of the *wh*-interrogative is true. In other words, one can answer a variable-question with a definite NP in an informative way just in case that the unique referent of such a definite NP is the same as the true answer to a variable-question.

Second, Keenan says that the predicate verb *know* is correctly paraphrased by 'can identify the referent of (such a definite NP)' in (15a) and 'can identify the answer to (such a variable question)' in (15b). To know a true answer to the question is precisely to be able to identify its true answer set and this is just the referent of the definite NP in complement position. With these two tools, it would be made clear that the definite NP in this environment is equivalent to an embedded *wh*-interrogative.

It is a good idea to incorporate the semantic property of the predicate verb into the account of the equivalence, for concealed questions are largely conditioned by the kind of predicate verbs. However, Keenan's account misses the basic fact that the definite NP as a concealed question is not interpreted as a unique object in much the same way that the variable-question conveyed by a *wh*-interrogative is not predetermined to correspond to a unique answer.

Of course, one can use a *wh*-interrogative to identify one particular object, but, as we will see, this does not mean that such a *wh*-interrogative is referential to that object by itself. Similarly, one can use a definite NP to identify a unique object, but this does not always mean that such a definite NP achieves the uniqueness of reference by itself. I will argue that the equivalence rests on the fact that just as the variable in a variable-question presupposes a group of relevant plural objects, the scope of definite NPs in the mode of question extends over a group of relevant plural objects. That is to say, the uniqueness of reference is suppressed in this environment. In section 5, I will argue that this relation between a definite NP and a group of relevant plural objects can be captured in terms of the grouping function of the definite article performed under grammatically marked clause types.

### 2.3. Nishiyama's (1997) Notion of Noun Phrases Involving Variables

Since Donnellan (1966) introduced the distinction of the referential and the attributive use, philosophers have discussed the referential properties of definite descriptions. Simplifying greatly, but hopefully without missing the essence, this distinction is summed up as follows. The referential use of definite NPs is conditioned by something which is introduced in the discourse independently of such definite NPs. The attributive use is conditioned by the descriptive content of the definite NP used. Thus, the referential use is successful if a definite NP is satisfied by a unique extralinguistic object, and the attributive use is successful if it is satisfied by a unique object, though the object in question may be described only linguistically and be absent as an extralinguistic entity. As Stampe (1974) shows, definite NPs in the attributive use are typically paraphrased by concessive clauses with *whoever*, as in (*Whoever it may be who is the murderer of Smith, the murderer of Smith is insane.*)<sup>2</sup>

Nishiyama (1997) claims that the distinction between the referential and the

attributive use is inadequate to capture the interpretations of definite NPs, and that there should be another independent reading of definite NPs. This is what he calls the NP involving a variable (NPIV, for short). Although both of the referential and the attributive use of definite NPs fall within the 'mode of reference', the reading based on a variable contained in a definite NP is not describable in terms of reference. That is to say, definite NPIVs are not referential.

It will be seen that NPIVs are designed in order to account for the question-like function which definite NPs of a certain type perform. Obviously, approaches based on the referential/attributive distinction will fail to explain this function, for they essentially hinge on the presupposition that definite NPs refer to something, whether or not that something is identifiable to both of the speaker and the hearer. We will see that concealed questions are part of NPIVs and the definite article associated with them can be semantically analyzed in light of the analysis of NPIVs.

Nishiyama argues that NPIVs are different from either definite NPs in referential use or definite NPs in attributive use. Definite NPs are, he claims, ambiguous in three ways: the referential and the attributive reading, and the "non-referential" reading which involves a variable. For the reason which becomes clear shortly, we will call the third reading the replacement reading. The replacement reading is relevant to the number discord, as observed in specificational sentences.

In support of this argument, Nishiyama (1997:762) cites the following sentence which can be interpreted in three ways in accordance with the triple distinction of referential, attributive, and replacement readings:

(16) The tenant of this apartment will change.

On the referential reading, the definite NP is taken to refer to a particular person, say John Smith, and the sentence is interpreted as equivalent to John Smith will change. Or more accurately, the sentence is interpreted as meaning that the personality of John Smith will change. On the attributive reading, the sentence is paraphrased as 'whoever it may be who lives at this apartment will change.' It is important to see that on this reading too, there is some unique person who fits the description of *tenant of this apartment*, though the speaker is not in a position to pick him out.

There is yet another reading of the sentence on which the definite NP does not refer to any particular person. Rather, it is interpreted as containing a variable to be filled by a value *x*, and the sentence means that the value *x* for the variable *the tenant of this apartment* will change from one person to another. In other words, one person replaces another as the value for the variable. This is the replacement reading of the sentence in (16).

Of particular importance is the fact that the replacement reading presupposes



the presence of multiple different values for the variable in the same way that there may be multiple different answers for a *wh*-interrogative such as (17):

(17) Who (=which person) is the tenant of this apartment?

We can answer this question by making specificational sentences like the following:

(18) a. John Smith is the tenant of this apartment.

b. Julia Roberts is the tenant of this apartment.

In this way, the scope of a definite NP on the replacement reading may extend over multiple referents. It does not pick out a particular entity, but it does correspond to a group of contextually relevant referents which satisfy it from one to another. Thus, a more precise paraphrase of the sentence on this reading would be 'the answer to the question *Who is the tenant of this apartment?* will change'.

Nishiyama goes on to claim that NPIVs are "non-referential" in nature, but definite NPs in referential and attributive uses both fall within the mode of reference. In both uses, definite NPs are used to refer to something particular, though the manners of reference are different. In this respect what he calls NPIVs sharply distinguish themselves from the referential and attributive uses. They are meaningful just because they are "non-referential."

As the answers listed in (18) indicate clearly, the replacement reading is closely related to specificational sentences. The replacement reading if successful requires the presence of multiple different values, each of which constitutes a specificational sentence. This one-to-many correspondence inherent in the relation between a variable and its value(s) allows us to understand the true nature of the number discord found in specificational sentences. The number discord describes a situation in which several different values are grouped together to specify a variable.

We know from the contrast in (7) that the definite article, but not the indefinite article, can form concealed questions. In the case of NPIVs including concealed questions, a definite singular NP may referentially correspond to the relevant plural objects which constitute the value for it. I will now explore the possibility that such one-to-many correspondences as manifested by the number discord are traceable to a grammatical property of the definite article as opposed to the indefinite article. That is, I will say that the definite article can serve to signal the presence of relevant plural objects which are grouped together. Notice that for each of the plural objects the status as a member to specify a variable does not differ from one to another. All values are equal in status in this respect. That is, they are undifferentiated in status. It will be shown that the undifferentiatedness of plural objects is the key to describing properly the one-to-many correspondence shown by definite singular NPs.

It is, of course, possible that a variety of semantic/pragmatic factors distinguish

the referential and replacement readings above. But the hypothesis that they can be distinguished by an explicit description of the grammatical properties that the definite article has is attractive and initially plausible. I will therefore compare three uses of the definite article each of which is not referential to a particular entity. They are (i) the definite article which determines NPIVs, (ii) the definite article which determines NPs with sporadic reference, and (iii) the definite article which determines subject NPs of generic sentences. These "non-referential" uses of *the* are negatively characterized as being selected in the absence of a uniquely designated object.

### 3. Comparison of NPIVs with Definite NPs in Referential Use

Up to now we have argued about definite NPs associated with the speech act of question. We have also seen that such NPs allow the one-to-many correspondence. We are now in a position to examine them in relation to the general properties of the definite article in English. I will argue that the presence vs. absence of the uniqueness of reference is the clue to understanding the difference between definite NPs in referential use and those that allow the one-to-many correspondence.

Uniqueness has been adopted in the study of the definite article, because it offers a basic account of the fact that a definite NP is used in a discourse as an expression anaphoric to the antecedent already introduced in the discourse, as in (19):

- (19) Once upon a time an old woman lived in a shoe. The old woman had many children.

Although such a strict anaphoric use of a definite NP sounds peculiar, as pointed out by Grannis (1974:107), it offers basic insights into the nature of the definite article. A definite NP is used anaphorically precisely because it is determined to be uniquely related to something in the context in which it is used.

"Unique identification" is a useful term to describe the function of the definite article in referential use, and often employed by researchers such as Lambrecht (1994) and Ward and Bimer (1995). What they mean by this term is essentially the same as saying that a definite NP serves to "pick out a particular object uniquely." As I have done so far, I use the term the uniqueness of reference when I generally speak of this function of the definite article. Of course, the object picked out by a definite NP may count either as a type or as a token. As will be argued in some detail, however, the type/token distinction does not matter much in the present discussion.

Besides the artificial example of strict anaphoric use of a definite NP in (19), there are cases where no explicit antecedent shows up in relation to a definite NP. Leech (1993:92) gives the following dialogue, in which no linguistic antecedent appears for *the lock* in (20B):

(20) A: In the end, we got through the back door.

B: Did you have to break the lock?

The definite reference in (20) is successful because we can assume that the back door has a lock as a unique entity. These observations suffice to show that the definite article is used in discourse in order to enable us to pinpoint the reference uniquely. But how to analyze this?

It is clear in (20) that behind the successful reference by means of *the lock*, there is a cooperation of the speaker and the hearer in the establishment of a uniquely identifiable object. One can thus say that a definite NP is referential to an object in one possible world when the speaker intends that it enables the hearer to pick out that object uniquely. As suggested by this way of phrasing, a definite reference can be factored into several conditions.

Clark and Marshall (1981) is an attempt to reveal the conditions involved in a definite reference. Clark and Marshall (1981:26) propose the convention stated in a single sentence in (21), in which a definite reference is factored into six conditions.

(21) A reference by means of definite NP *D* is a reference to:

- a. the totality of objects within a set of objects in one possible world, which set of objects is such that
- b. the speaker has good reason to believe
- c. that on this occasion the listener can readily infer
- d. uniquely
- e. mutual knowledge of the identity of that set
- f. such that the intended objects in the set fit the descriptive predicates in *D*.

It is obvious that of these six conditions, (21b) and (21c) are related to the speaker's attitude toward an utterance involving a definite NP, and (21a), (21d), (21e) and (21f) are related to the grammatical properties of the definite article.

Let us see how the conditions in (21) jointly serve to guarantee the one-to-one correspondence between a definite NP and the object it is used to refer to in relation to a bridging reference. As already hinted at in (20), in bridging reference, the conditions are organized at the level of pragmatic inference. Consider the following example and the analysis given by Clark (1977:415):

- (22) a. I met two people yesterday. The woman told me a story.  
 b. One of the entities referred to by "two people" is a woman and the other is not; this woman is the antecedent of *the woman*.

Besides the speaker's assumptions stated in (21b) and (21c), the other conditions jointly work to guarantee a definite reference to an implicit antecedent. Conditions (21a) and (21e) conspire to specify the totality and mutually known identity of the

set of objects which include the antecedent, Condition (21f) gives the descriptive content of the designated object, and Condition (21d) guarantees that the NP applies to only one object. This last condition is of particular importance; without the condition for uniqueness, one can never arrive at the conclusion that one of the entities referred to by "two people" is a woman and *the other is not*.

Conditions (21a), (21d), (21e) and (21f) have a direct bearing on the present discussion and I will adopt the conditions in what follows. Satisfying the conditions in (21) is a *sine qua non* for the referential use of a definite NP. I will argue that "non-referential" uses of definite NPs are describable as something that lacks one or more conditions in (21). These conditions are essential to reference to a particular object, but they are suppressed when another facet of the definite article shows itself.

The "non-referential" nature of NPIVs is comparable to the fact that open propositions with variables expressed by *wh*-interrogatives do not talk about a particular entity. NPIVs are semantically equivalent to open propositions. NPIVs are "non-referential" in that they only make a list which may contain several members, but they do not pick out a particular member from that list. In view of the fact that the NPIV in (6c) does not allow exceptions, we may safely say that the list made by an NPIV satisfies Condition (21a), the 'totality of objects within a set of objects in one possible world,' and presupposes Condition (21e), the set or group of the relevant referents, but it may or may not have Condition (21d), uniqueness, which remains unspecified, and it violates Condition (21f), a designated object. In short, the conditions for the uniqueness of reference can be weakened: some of them are suppressed in the mode of variable-question.

When I say that a definite NP is "non-referential", I mean that the NP fails to perform what a definite NP with the unique identifiability does. On the other hand, such "non-referential" NPs will be shown to perform what referring expressions cannot do. A word on "non-referential" is necessary in this connection. I will exclusively deal with NPs in argument position and do not discuss predicate NPs in this paper. Certainly, they are non-referential in that they denote properties and do not have bearing on objects. The "non-referential" NPs discussed here do have bearing on objects. Thus, the present discussion of "non-referential" use of definite NPs applies to predicate NPs. They must be dealt with independently.

#### **4 Factors in Opposition to the Uniqueness of Reference**

##### *4.1. Sentences which depict changing or changeable situations*

We have seen that in NPIVs, the uniqueness of reference is underspecified and the scope of definite singular NPs in this use may extend over plural objects, as

exemplified by the number discord in specificational sentences. In this connection it is interesting to see the cases where definite singular NPs stand for a range of objects rather than a body of separate objects. Consider the following examples:

- (23) a. The button controls the temperature in this room.  
 b. Everything depends on the weather.

Here the definite singular NP does not pick out a particular instance of the weather or the temperature uniquely, but rather it stands for the range over which their instances may change. To apply the analysis developed for NPIVs, each of the definite NPs in (23) involves a variable and it is filled by a range of different values.

Notice in (23b) that the predicate *depend on* is also used in (2), a fact which suggests the similarity between the two cases. Predicates like *control* and *depend on* depict changing or changeable situations which involve a variable, and there is a range of values for it.

It is crucial to see that what the definite NP of this sort stands for is not something fixed in reference, but something which continues in time and space. The sentences having these predicates do not talk about a fixed referent in a fixed situation. Instead, these sentences can repeatedly apply to a range of different objects. This semantic analysis will have important consequences for the linkage of grammatically marked clause types with the absence of the uniqueness of reference.

#### 4. 2. Plurality

As we have seen, there are cases where the conditions for a successful reference by means of a definite NP are weakened. The conditions are weakened by the speech act of variable question, and so NPIVs allow the one-to-many correspondence. I have referred to the use of such definite NPs colored by a marked clause type as the mode of definite NPs. I will further argue that the absence of the uniqueness of reference can be used to signal the marked mode of a definite NP which is comparable to the marked clause type. I will show that the analysis of NPIVs in terms of the one-to-many correspondence is also instrumental in the description of definite NPs in sporadic reference use and generic use. A cross-domain generalization for the semantics of the definite article will be abstracted from these three uses.

The conditions for a successful reference can be weakened by the marked mode conveyed by a definite NP, but this is not the only factor that gives rise to this effect. Plurality serves to weaken the conditions, too. Consider the following sentences taken from Langendonck (1979:44):

- (24) a. The boys are fighting over there, though not all of them.  
 b. Boys fight, though not all of them.  
 c. \*There are boys fighting over there, though not all of them.

Definite plural NPs do not refer to all the objects which would be described by such NPs, which suggests strongly that the definite article associated with such NPs is not always strict in expressing "the totality of objects within a set of objects in one possible world." That is, Condition (21a) may be suppressed by plurality.

While bare plural NPs on an existential reading must express the totality of the objects which they describe, definite plural NPs and bare plural NPs in generic use do not have to cover the entire class of objects they can describe. The above examples indicate that although the genericity expressed by bare plural NPs is qualitatively different from the referentiality expressed by definite NPs, the two can converge on at least one point: they refer to plural objects with patent exceptions to the reference.

By generic NPs we provisionally assume NPs such that they express a concept which is applicable to all members of a kind. They express the general tendency shown by a kind, but they also allow exceptions to the tendency. Later, we will modify our assumption that generic NPs express a concept. We will see there that the genericity expressed by bare plural NPs and definite singular NPs cannot be accounted for without reference to the presence of relevant plural objects.

The contrast between (6c) and (24a) indicates the difference between a definite NP in the mode of question and a definite NP in referential use. Although both contain plural nouns, the former is subject to Condition (21a), but the latter is not. Answers to a question will presuppose the entire class of the objects which satisfy that question, but reference to a set of objects can be made without presupposing the entire class of the objects.

As Langendonck (1979:35) shows, *the*  $N_{(pl.)}$  means the same as *all the*  $N_{(pl.)}$  when the plurality expressed is specified with respect to its number.

(25) a. The ten soldiers were killed.

= b. All the ten soldiers were killed.

When there is no specification for number in the plurality of a plural noun, one cannot determine the totality of objects which form a set. Reference to plural objects by means of *the*  $N_{(pl.)}$  is not the same as quantification over all the objects describable by such an NP. Thus, *the*  $N_{(pl.)}$  does not mean the same as *all the*  $N_{(pl.)}$ .

There are some elements which weaken the uniqueness of reference. Plurality without number specification is one of them. It is also weakened by the interpretation of the sentence in which a definite NP is embedded. In sum, the definite article does not carry the uniqueness of reference when the sentence which contains a definite NP does not talk about one particular object or a set of objects which are specified in number. This description is true of sentences which express habit or repetition: one is engaged in his habit without any specification of how many times he is engaged in

his habit. This also holds for sentences which express question. Since questions are open propositions, there is no particular object about which they talk.

### 5. On the Dual Nature of the Definite Article in English

We have seen two contrasting aspects of the definite article. On one aspect, it signals the one-to-one correspondence between an NP and an object. On the other aspect, it signals the one-to-many correspondence between an NP and different objects. Of course, the one-to-many correspondence must be constrained. In this section, I will adopt Birner and Ward's (1994) proposal that the one-to-many correspondence is governed by the undifferentiatedness of multiple referents.

As Birner and Ward point out correctly, the uniqueness of reference is only a sufficient condition for the appropriate use of the definite article, and there are other factors which control its use. There are cases where definite singular NPs show up in the presence of multiple referents that fit the description offered by a definite NP, as shown in (3a). To analyze this use of definite singular NPs, they first set up the following two situations: (i) a room with three identical windows, and (ii) a room with three windows of different shapes and sizes, and with curtains different in color.

Birner and Ward then observe that the following sentence is felicitously employed in a stuffy room in both situations:

(26) It's stuffy in here. Can somebody please open the window?

They note that although the definite NP in (26) is singular, the hearer may "felicitously respond by opening more than one window". This is valid for both situations.

Birner and Ward shrewdly observe that such a use of definite singular NPs is impossible in the following context:

(27) Next week I'm going to start redecorating this room. #I'll start by replacing the window.

In this context, the definite singular NP doesn't work in either situation. The question is, what is the difference between (26) and (27)?

Opening some windows to change the air is carried out independently of considerations of the feature that each window has. The three windows are undifferentiated in this respect. On the other hand, redecorating a window has to do with the feature that a particular window has, and each of the three windows is differentiated in this respect. This difference is crucial to our discussion.

Birner and Ward provide an insight into this use of the definite article, and say that *the* is appropriately used for multiple things when they are undifferentiated. With this condition, the uniqueness of reference is not required.

These considerations lead us to claim that the uniqueness of reference, which is

essential to a definite NP in referential use, gives way to the non-uniqueness claim of undifferentiatedness if all the objects described by a definite NP are equal in status.

The fact that the definite singular NP can have reference to more than one object under the condition described is reminiscent of the number discord found with specificational sentences. An NPIV is allowed to have multiple values. The context described in (26) is unrelated to questions, or the value-for-variable relation, but there surely is a one-to-many correspondence. We are now in a position to clarify the rule that governs the one-to-many correspondence associated with definite NPs. The semantic properties of concealed questions and those of the definite NP used in (26) are certainly different from each other, but they have one thing in common: undifferentiatedness. All values are undifferentiated in status in a list for an NPIV.

Let me introduce the following hypothesis designed to achieve a cross-domain generalization about the different uses of the definite article:

- (28) Grouping function: a definite singular NP stands for a group of objects when the definite article marks the undifferentiatedness of the objects.

This hypothesis must be complemented by the following principle which states the relationship between the modes of definite NPs and marked clause types.

- (29) The definite article serves the grouping function when the type of the clause in which a definite NP is employed does not depict a specific situation but a pattern of situation which can continue.

From this hypothesis it follows that a definite NP employed in such a clause type has bearing on a set of different objects rather than one specific object. As clause types like interrogatives are marked by syntactic forms, the modes of definite NPs are signaled by the presence vs. absence of the uniqueness of reference. That is, the "non-referential" character of a definite NP is an indication that the NP conveys some marked mode. In what follows, I will demonstrate how the hypothesis accounts for the interrelation created by definite articles in different modes.

## 6. Sporadic Reference and Habitual Sentences

Quirk et al. (1985:269) observe that in the following sentence, the definite NP *the theater* is ambiguous in two-ways:

- (30) My sister goes to the theater every month.

On one reading, it is taken to refer to a particular building which functions as a theater. On the other reading, the sentence has no reference to one particular theater. On the latter reading, which is more likely, the definite NP stands for the theater as an institution which may have multiple branches. Thus, sentences like this can be felicitously used in the following context:



- (31) London has many theaters in it, and my sister, who lives there, goes to the theater on Sunday.

As Quirk et al. note, one cannot identify the theater on the latter reading by means of *Which theater?* This is what they call the sporadic reference use of *the*. Similar to the definite NP used in (26), the definite NP in sporadic reference use allows the one-to-many correspondence. In this use, the definite singular NP has a positive bearing on different objects as extralinguistic entities.

We have seen in section 3 that the referential use of definite NPs is accounted for in terms of the uniqueness of reference as specified in (21). Problems begin to arise when one takes into consideration the "non-referential" aspect of the definite article. One can find the definite article which is employed without a unique object to be picked out. For example, in (32a) *the guitar* is a definite NP, but it does not convey the uniqueness of reference in the sense developed by Clark and Marshall. It may be used in contexts like (32b) where there are plural guitars:

- (32) a. I like to play the guitar.  
 b. I have three guitars, because I like to play the guitar.

You cannot identify the guitar by asking such as the following question:

- (33) A: I like to play the guitar.  
 B:??Which guitar do you refer to?

Sentences like (32a) express the speaker's habit of guitar-playing and the situation described by the sentence will recur. In every situation in which the speaker is engaged in his habit, the guitar he plays keeps the same status.

The sentences which depict habitual activities are distinguished from sentences which depict particular events, and they are called *habitual sentences* in Krifka et al.'s (1995) terminology. Habitual sentences are a subtype of declarative sentences, but they have distinctive grammatical characteristics. They are specifically used for the speech act of drawing a generalization about one's habit rather than reporting on a specific situation. Thus, habitual sentences belong to a marked clause type.

As Lawler (1973:7) points out, it is characteristic of habitual sentences to depict a pattern of situation which is taken to continue in the future. For example:

- (34) a. Bill walks to school.  
 b. \*Bill walks to school, but he graduated last week.

The sentence in (34a) is a habitual sentence and depicts Bill's habitual activity of going to school by walking, which is taken to continue in the future. The sentence in (34b) is ill-formed, because the second clause contradicts the habitual interpretation of the first clause.

Postulation of a clause type for habitual sentences is strongly supported by the

fact that they can adjust the aspectual property of verbs to the habitual interpretation specific to them. The examples in (35) come from Carlson (1995:232).

- (35) a. John pushed carts to Cleveland.  
 b. John pushes carts to Cleveland.

The sentence in (35a) depicts a fixed situation in the past, but the sentence in (35b) is a habitual sentence and it depicts a pattern of situation in which John is engaged in cart-pushing. There is a difference in the meaning of the verb between (35a) and (35b). In (35a), *push* is an activity verb, but in (35b) it comes to mean a state, a state in which John is engaged in his habitual activity.

These grammatical facts must be attributed to the clause type specific to habitual sentences in which the speaker exhibits the speech act of drawing a generalization about one's habit. This rather simplistic view of habitual sentences suffices to show the point that they offer an environment in which the grouping function is at work. We can now compare the contrast between the sentence which depicts a specific situation and the sentence which depicts a pattern of situation which continues in time, on the one hand, and the contrast between a definite NP which carries the uniqueness of reference and a definite NP which does not carry it, on the other.

Reference to one thing or one set of things makes sense when it is differentiated from other things. This is the case with sentences which depict specific situations. Reference to one thing, however, doesn't make much sense when it is in a set whose members are all equal in status. One can randomly select any member to see the same effect. This is the case with habitual sentences. A similar if not identical analysis applies to variable questions. A variable question presupposes a set of pragmatically relevant answers, and the variable continues to be open to any one of them.

It might be said that the present discussion does not do justice to the distinction between type and token.<sup>3</sup> While the definite NP in (30) does not refer to a token, it might refer to a certain type. However, the type/token distinction is not of much help in this context. In (30), for instance, the speaker's sister does not go to a theater which exists as a type. She goes to a theater, or more plausibly, several different theaters which *is/are* actually located in London. Nor does the type/token distinction clarify the definite NPs of *the guitar* in (32) and *the window* in (26). They do not count as types or conceptual entities. On the other hand, there appears to be no reason for saying that these NPs directly refer to tokens. Reference to a token does not allow the one-to-many correspondence. What is critical to the present discussion is the fact that the definite singular NP stands for recurrent situations in which there are different objects each of which is undifferentiatedly described by the NP. Such different objects may form a group or a subgroup of a larger category. On this

condition, the scope of a definite singular NP may extend over plural objects.

I hasten to add, however, that there are leaps in logic in equating the definite article in sporadic reference use with the definite article in NPIVs. While the former stands for a member included in a larger group and cannot be asked by *Which X?*, the latter stands for some concrete set which comprises several relevant members, and which can be asked by *Which X?* Moreover, the latter type of definite NPs is related to the value-for-variable relation, but the former type does not create such a relation.

The relationship between the two uses of the definite article should be captured as a matter of convergence rather than equivalence. Various uses of the definite article converge on the grouping function as stated in (28) when they are embedded in the sentences which apply to a pattern of recurrent situations rather than depict specific situations, as stated in (29). Just as habitual sentences are free from any specific situation, so sentences which carry questions are free from the specific entity which qualifies as the answer to them. This motivates the two uses of the definite article to converge.

There is a fundamental difference between picking out an intended referent uniquely and putting it in a particular group. The latter function of grouping is related to the marked mode expressed by a definite NP. For example, NPIVs express the mode of question, and the sporadic reference use of definite NPs express the habitual or recurrent situations in which relevant objects are grouped.

## 7. Definite Article in Generic Use

What we have argued so far has obvious implications for the definite article in generic use. Space does not allow me to review what has been said of *the* in generic use in detail, and I can only summarize the basic point about it. I will argue that as far as the definite and the bare plural generics are concerned, they not only express concepts, but also have bearing on plural objects which are grouped together by the concepts they express. That is, definite NPs in generic use are not referential, but they surely have referents. Indefinite singular NPs in generic use, by contrast, do not have such bearing on referents. I will discuss the grammatical and semantic differences between the definite article in generic use and the indefinite article in generic use.

Broadly speaking, generic sentences express statements about the tendency shown by a kind. On close examination, however, it is shown that genericity is not a uniform concept; there are qualitative differences among the NPs used for generic sentences. Notably, there is a sharp contrast between generic NPs determined by *a* and bare plural NPs. We will focus on subtle but important differences in quality among generic NPs rather than capture general characteristics common to all of them.

### 7.1. Referentiality and genericity

Let us begin by examining the relation between referring expressions and generic NPs. As shown in (24), there is a similarity between the two. Indefinite NPs in generic use exhibit distribution quite similar to definite NPs in referential use. Some researchers (Postal (1966), Langendonck (1979), Lambrecht (1994) among others) have alluded to "semantic definiteness" in relation to the indefinite NPs on a generic reading. Consider the following sentences:

- (36) a. To hell with the corrupt people here!  
 b. To hell with corrupt people!  
 c. \*To hell with {some corrupt people/a certain corrupt man} here!

In this context of malediction, the definite NP in referential use and the bare plural NP in generic use are both acceptable, but the indefinite NP which doesn't have a generic reading is excluded. Similarly:

- (37) a. Big as {the boy/Harry/that gorilla/\*some giant/\*a dog} was, he could not lift it.  
 b. Expensive as butter is, I still prefer it.  
 c. Strong as gorillas are, they can't outwrestle Superman.  
 d. Cold as a glacier is, it is still not as cold as outer space.

Postal (1966) observes that in concessive clauses, referring expressions and indefinite NPs with generic readings are acceptable, but indefinite NPs without generic readings are not. This means that the generic NP, in parallel with referring expressions, can evoke some fixed thing in our mind. This is the general tendency shown by a kind. It is characteristic of NPs in generic use to have this capacity.

It might be argued that genericity is a notion which has close affinities with referentiality. Actually, Lambrecht (1994:88) goes further to say of generic NPs that "[a]mong the expressions with uniquely identifiable referents we may also count generic noun phrases, whether definite or indefinite. Identifying the class of all entities which can be designated with an expression is identifying a unique referent." With this reasoning, he tries to provide a semantic basis for the parallelisms in distribution between referring expressions and generic NPs.

Lambrecht's proposal makes some sense when we suppose that the uniquely identifiable referent of a generic NP, especially that of a definite generic NP, is extended from an individual entity to an individual kind which contains all the members of that kind. This extension appears to be a reasonable one, but one can still point out that an extension of this sort involves a number of important changes in the function performed by *the*. There is evidence that semantic properties of a definite generic NP are related not only to a conceptual unit of a kind, but also to the multiple

members which constitute that kind. In this sense, the semantic properties allow the one-to-many correspondence. I will illustrate this in relation to the selectional restriction caused by kind-predicates. It also shows the heterogeneity in generic NPs.

### 7.3. Compatibility with kind-predicates

Chesterman (1991:71) offers a clear contrast between referring expressions and bare plural NPs in generic use. Bare plural NPs go with kind-predicates like *be widespread*, but referring expressions do not even if they are plural. For example:

- (38) a. \*Fido, Rover, Spat and Morris are {common/rare/widespread}.  
 b. {Terriers/Long-haired bulldogs/Dogs called Fido} are {common/rare/widespread}.

This contrast shows that kind-predicates can be applied to a set with an indefinitely large number of members, but not to a set with a fixed number of members.

Conceptually speaking, genericity and undifferentiatedness have plurality in common. Both are related to multiple different objects rather than a particular object which existed just for once. I have argued for the grouping function of *the* in relation to NPIVs and the sporadic reference use. This is also operative in *the* in generic use.

Let us now illustrate the relation between genericity and plurality. Definite singular NPs in generic use may be combined with predicates that require plurality. The following examples are taken from Carlson (1977:423) and Yasui (1988:117).

- (39) a. {The/\*A} wolf gets bigger as you go north from here.  
 b. Wolves get bigger as you go north from here.

Obviously, in (39a) the definite singular NP does not mean that some particular wolf changes its size as it moves to the north. Nor is it the case that the whole class of wolves changes its size. What is asserted to change the size in this sentence is each member of the class. Like the sentence with the bare plural NP in (39b), the sentence in (39a) talks about the plural wolves relevant to our interest. This meaning is not available for the indefinite singular NP. The question is why *the* can form an NP that runs parallel to a bare plural NP in spite of the number difference, and differs from an indefinite singular NP in spite of the similarity in number.

As the following examples illustrate, the definite article in generic use contrasts sharply with the definite article in referential use in that it stands for plural objects which form a kind rather than picking out a particular object uniquely:

- (40) a. {The/\*A} beaver is increasing in numbers  
 b. Beavers are increasing in numbers.  
 (41) a. {The/\*A} dodo is extinct.  
 b. Dodos are extinct. (Perlmutter (1970:240-241))  
 c. \*{John/The man} is extinct. (Yasui (1988:117))

Being similar to (39a), the sentence in (40a) with a definite NP does not mean that a particular beaver increases itself numerically. It is valid for plural beavers.

As shown in (41c), kind-predicates like *be extinct* bar referring expressions from occurring in subject position. This means that the genericity conveyed by definite NPs cannot simply be accounted for in terms of a uniquely identifiable referent as assumed by Lambrecht (1994:88). Rather, it has a positive bearing on the multiple different objects grouped together by a definite NP. As far as the definite and the bare plural generics are concerned, we may reasonably concur with the idea suggested by Woisetschlaeger (1983:142) that the "referents of generics are all the real-world instantiations of the generic concept."

It is evident that predicates such as *be increasing in numbers* make sense only if there are assumed to be plural objects of which these predicates predicate a state of affairs. The plural sense of these predicates is a function of the relevant plural objects. In bare plural sentences the form of subject NPs meshes with the semantic plurality of the predicates. In definite generic sentences, however, the form of subject NPs does not mesh with the plurality required by the predicates. The question of why the singular NP may satisfy this requirement can only be solved if the kind-predicates are predicated of the relevant plural objects but not directly of the NP in subject position. Kind-predicates such as *be extinct* thus are predicated of the plural objects that are grouped together in virtue of the grouping function.

For the most part the definite generic runs parallel to the bare plural generic, but there are some differences. Carlson (1980:277) observes that the definite generic in (42a) is somewhat odd, but the bare plural generic is perfect.

(42) a. ?The elephant is extremely numerous.

b. Elephants are extremely numerous.

The difference between *be increasing in numbers* and *be numerous* mirrors the difference in acceptability between (40a) and (42a). Semantically speaking, (*be*) *numerous* is predicated of a group which is taken to consist compositionally of multiple members, but (*be*) *increasing in numbers* is predicated of a group which is taken to holistically include multiple members. The definite article in generic use serves to offer a class in which relevant objects are grouped together. The definite NP in generic use, thus, is valid for a class that consists of plural objects.

As shown from (39) to (41), indefinite singular NPs are excluded from the context of kind-predicates, although they may be employed as subject NPs of generic sentences like *A lion is a mighty hunter*. Bare plural NPs and definite singular NPs form a class, and indefinite singular NPs contrast with them. As in (7), we are faced with the contrast between *the* and *a* again. In the present discussion, *the* has

something different from *a* in that it has some feature related to plurality. We can say that the definite article has the grouping function, and so definite singular NPs can stand for plural referents. However, the indefinite article does not have the function.

Let me comment on one possible approach to indefinite singular NPs in generic use. These NPs are available only for generic statements about a quality which is attributed to an individual object (see Nishida (1997) for discussion and the references cited therein). *A lion is a mighty hunter*, for example, may qualify as a generic statement about the 'lionhood' just because the quality of *being a mighty hunter* is predicated of what an individual lion is. Definite singular NPs, by contrast, are available for generic statements about a class that consists of plural objects.

The following sentences lend credence to the idea that there is a semantic difference between a generic statement whose subject NP is determined by *the* and a generic statement whose subject NP is determined by *a*. The example in (43b) is due to Fukuzawa (1985:4).

- (43) a. A honey-bee is a bee that makes honey.  
 b. {The/\*A} honey-bee has a complex social system.

The generic statement about 'honey-beehood' is traceable to an individual honey-bee, but the generic statement about the complex system of a society is not traceable to an individual honey-bee. An individual honey-bee cannot constitute a society. A group of honey-bees constitute a society. We can say that the definite article can determine an NP whose scope extends over plural objects, which the indefinite article cannot. This line of reasoning strongly supports the validity of the grouping function in (28), in which the definite article is specified to have bearing to a group of plural referents.

Of course, definite NPs in generic use are different from NPIVs in some not trivial respects. While NPIVs are restricted in reference and interpretation by the kind of predicates to which they are subject, definite NPs in generic use are not restricted in this way. Generic definite NPs differ from definite NPs in sporadic reference use, too. A generic definite NP stands for a set of things which is indefinitely large. A definite NP in sporadic reference stands for a set of the things which are grouped together as having the same function. Thus, the similarity among them is captured in terms of convergence rather than equivalence. The rules responsible for the use of the definite article converge on the undifferentiatedness when it does not carry the uniqueness of reference. Just as a definite NP in sporadic reference does not refer to, but can extend over, multiple objects, a generic definite NP does not refer to, but does include, multiple referents which form a kind.

In Clark and Marshall's terms, the generic use does not fulfill the conditions of 'uniqueness' (21d) and 'the intended objects to fit the descriptive predicates offered

by definite NPs' (21f). The sporadic reference use does not fulfill Condition (21d) either, but it fulfills Condition (21f). In both cases, Condition (21e) is preserved. That is, the identity of the set which includes objects described by a definite NP. To summarize the similarity among the three uses we have discussed, in the NPIV, the set of the values which may fill a given variable is understood. In the sporadic reference, the set that includes some objects of the same function is understood. In the generic NP, the set that includes all objects of a kind is understood.

#### 7.4. *Definite NPs with adjectival heads*

Besides the compatibility with kind-predicates, there is further evidence that *the* in generic use has to do with plural objects. Definite NPs with adjectival heads illustrate this point. The adjectives that describe qualities unique to human beings are combined with *the* to form NPs that invite a generic interpretation, as in:

- (44) a. The poor are always with us.  
 b. The young in spirit enjoy life.

Quirk et al. (1985:422) observe that definite singular NPs such as *the poor man* are ambiguous between the reading in which they have a unique referent and the reading in which they have no fixed referent and represent a category, i.e. the generic reading, definite NPs composed of these adjectives are unambiguously of the generic reading.<sup>4</sup>

This difference in reading is demonstrated by the following contrast:

- (45) a. \*The rich were found guilty yesterday.  
 b. The rich men were found guilty yesterday.

The form of a definite NP with an adjective as head is proper to generic statements and do not convey information about some specific situation.

For the purpose of this paper, it is interesting to see why these forms require plural agreement of the predicate verb.

- (46) The rich {are/\*is} not always happy.

Because grammatical numbers are specified for nouns, NPs with nominal heads are grammatically constrained to impose number agreement on predicate verbs. On the other hand, numbers are unspecified for adjectives, and so NPs with adjectival heads are free from the constraint that NPs with nominal heads have. This results in the situation in which the plurality effected by the grouping function controls number agreement: the predicate verb in (46) exhibits plural agreement in association with the relevant objects rather than the subject NPs.

This fact can be cited as evidence that generic statements with a definite subject NP talk about plural objects rather than a unique object, and in this sense the definite article in generic use does not carry the uniqueness of reference but rather assumes the grouping function stated in (28).



## 8. Conclusion

Based on the fact that the value-for-variable relation allows a one-to-many correspondence between a variable and its values, I have argued that definite NPs involving variables do not have the uniqueness of reference conveyed by definite NPs in referential use. I have further pointed out the parallelism among NPIVs, definite NPs in sporadic reference use, and definite NPs in generic use in that all of them do not pick out particular objects. I have claimed that the parallelism should be accounted for not in terms of equivalence but rather in terms of convergence of the uses of *the*. They converge on the grouping function as defined in (28). I have suggested that it has a strong bearing on the type of clauses in which it is embedded. Interrogative clause type interacts with NPIVs and habitual clause type if so called with the sporadic reference and the generic use.

To conclude, one cannot interpret a definite article semantically without taking into consideration the way it is intended to be used. This does not mean, of course, that the way it is intended to be used is solely a matter of psychology. I hope I have shown that it has certain syntactic correlates. To put it differently, there are certain linguistic patterns which specify the way a definite NP is used.

## NOTES

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<sup>1</sup> Concealed questions are clausal in distribution. Ross (1977) points out that in many cases, definite NPs as concealed questions behave like tensed clauses and contrast with definite NPs in referential use. When *tell* takes a tensed clause complement, it requires the indirect object obligatorily. The same is true of the sentences in which *tell* takes a concealed question complement.

- (i) a. Zack told \*(me) {that he was hungry/how long it had rained}.
- b. Zack told \*(me) the street that we lived on.
- c. \*Zack told the street that we lived on to me.

The indirect object in (ib) cannot be replaced by the oblique object, as the starred

sentence in (ic) shows. There are nouns which are used specifically as concealed questions. *Whereabouts* is a case in point. The concealed question formed by this noun shows the same pattern as above. For example:

- (ii) a. Jack told me the whereabouts of the money.
- b. \*Jack told the whereabouts of the money to me.
- c. Jack told the story to me.

As shown in (iic), *tell* imposes no such constraint on complement NPs which qualify as referring expressions.

This syntactic distribution of concealed questions is similar to the so-called Internal *S* constraint proposed by Kuno (1973). In general, a sentence cannot be embedded inside another sentence, as in:

- (iii) a. I took it for granted that George would help us.
- b. \*I took that George would help us for granted.

Similar observations can be made in relation to the deletion of an identical phrase. As in (iv), definite NPs as concealed questions and tensed clauses can be deleted in the second sentence, but definite NPs in referential use cannot be deleted in this way.

- (iv) a. Horace knows {where/that} the grass is growing, but they don't know  $\phi$ .
- b. Horace knows [the street that we live on], but Jerry doesn't know  $\phi$ .
- c. \*Horace avoids [the street that we live on], but Jerry doesn't avoid  $\phi$ .

These facts may suggest that concealed questions structurally differ from definite NPs in referential use. It remains to be seen whether the facts are purely of a syntactic nature or there are other independent factors involved.

<sup>2</sup> I do not try to analyze the attributive use in this paper, and take as given the difference between the referential and the attributive use. Whatever difference this may be, it is clear that both uses of definite NPs fall within the mode of reference, and that the speaker has some referent in mind when he uses a definite NP attributively. In any case, both are fundamentally different from the NP<sub>IV</sub> in that they cannot be satisfied by different objects. It might be argued that the so-called attributive use is described in terms of the absence of Condition (21e), though I have no strong argument to support this speculation at present.

<sup>3</sup> Hideki Tanaka (personal communication) has suggested to me that the one-to-many correspondence shown by definite NPs such as NP<sub>IV</sub>s can be explained in terms of the type/token distinction. In (1), for example, the definite NP *the doctor* stands for a type, and the predicate *be someone different* is predicated of the plural instantiations, namely, tokens, of the type. This line of reasoning is surely a possibility, and worthy of further inquiry. However, I do not adopt it here for two reasons.

First, the objective of this paper is to advance the hypothesis that in parallel

with clause types, definite NPs can convey grammatically marked modes in virtue of their referential properties. In the present discussion, the definite NP in (1) is regarded as a definite NP which is sensitive to the speech act of variable-question. Similarly, the definite NP in sentences like (23) stands for a changing or changeable situation. Situations of this sort can be semantically analyzed as containing variable-questions like *How is the weather?* I have further argued that the NP in sporadic reference use is comparable to the marked clause type of habitual sentences. It is not clear to me whether the type/token distinction can handle the relation between referential properties of definite NPs and marked clause types.

The second reason may be more of a terminological issue. 'Type' is a conceptual entity independent of spatio-temporal frames, and 'token' is an instantiation of a type which is subject to such frames. Of course, much depends on how to define these terms. It should be stressed that the definite NPs of the kind discussed in this paper are not referential, but they do have referents. They stand for concrete, rather than conceptual, entities. It is arguable that they are used to refer to tokens which change from one to another, or to tokens which are supposed to constitute a sporadic set, or an endless sequence. In any case, it is characteristic of these definite NPs to exhibit a one-to-many correspondence between a grammatically singular NP and referentially plural objects. Being mainly due to lack of my understanding, again, it is not clear to me how to express this correspondence strictly in terms of the type/token distinction.

<sup>4</sup> These NPs with adjectival heads cannot be considered as cases of ellipsis. It might be said that *the poor* is equivalent to *the poor people*, and that the plurality of these NPs derives from a deleted head noun like *people*. However, such an analysis is not correct. What is most important in these NPs is that they are forms specific to generic use. A generic form would be *poor people* rather than *the poor people*. Given that *the N<sub>(pl)</sub>* is not a normal form employed for generic sentences, we see that the deletion of plural nouns like *people* is not the right way.

There is evidence that the deletion does not take place in this construction. NPs with adjectival heads like *the poor in spirit* do not have equivalent NPs with nominal heads, as the following examples taken from Quirk et al. (1985:886-887) illustrate:

- (i) a. The poor in spirit need more help.
- b. \*The poor people in spirit need more help.
- c. The people poor in spirit need more help.

As the example in (ic) shows, *poor in spirit* is a constituent which cannot be separated into two parts. A deletion analysis would have to posit different base forms for the adjectives which can take prepositional complements, which is clearly inconsistent. The absence of the corresponding NP with a nominal head in these

cases lends credence to the idea that the plural agreement is motivated by the relevant plural objects rather than some grammatical device.

#### REFERENCES

- Birner, Betty and Gregory Ward (1994) "Uniqueness, Familiarity, and the Definite Article in English," *BLS* 20, 93-102.
- Carlson, Gregory (1977) "A Unified Analysis of the English Bare Plural," *Linguistics and Philosophy* 1, 413-456.
- Carlson, Gregory (1980) *Reference to Kinds in English*, Garland, New York.
- Carlson, Gregory (1995) "Truth Conditions on Generic Sentences," *The Generic Book*, ed. by Gregory Carlson and Francis Pelletier, 224-237, University of Chicago Press, Chicago.
- Chesterman, Andrew (1991) *On Definiteness: A Study with Special Reference to English and Finnish*, Cambridge University Press, Cambridge.
- Clark, Herbert (1977) "Bridging," *Thinking: Readings in Cognitive Science*, ed. by Philip Johnson-Laird and Peter Wason, 411-420, Cambridge University Press, Cambridge.
- Clark, Herbert and Catherine Marshall (1981) "Definite Reference and Mutual Knowledge," reprinted in *Arenas of Language Use*, Herbert Clark (1992) 9-59, University of Chicago Press, Chicago.
- Declerck, Renaat (1988) *Studies on Copular Sentences, Clefts, and Pseudo-Clefts*, Leuven University Press, Leuven.
- Donnellan, Keith (1966) "Reference and Definite Description," reprinted in *Pragmatics: A Reader*, ed. by Steven Davis (1991) 52-64, Oxford University Press, New York.
- Fukuchi, Hajime (1995) *Eigo rasii Hyogen to Eibunpo*, Kenkyusya, Tokyo.
- Fukuzawa, Kiyoshi (1985) "Sosyo Meisiku no Tokusei nituite," *Kumamoto Daigaku Kyoyobu Kiyoo Gaikokugo-Gaikoku Bungakuhen* 20, Kumamoto University, 1-24.
- Grannis, Oliver C. (1974) "Notes on 'On the Notion 'Definite'," *Foundation of Language* 11, 105-110.
- Grimshaw, Jane B. (1977) *English Wh-Constructions and the Theory of Grammar*, Doctoral dissertation, University of Massachusetts.
- Higgins, Roger (1979) *The Pseudo-Cleft Constructions in English*, Garland, New York.
- Huddleston, Rodney (1984) *Introduction to the Grammar of English*, Cambridge University Press, Cambridge.

- Huddleston, Rodney (1994) "The Contrast between Interrogatives and Questions," *Journal of Linguistics* 30, 411-439.
- Keenan, Edward L. (1975) "Logical Expressive Power and Syntactic Variation in Natural Language," *Formal Semantics of Natural Language*, ed. by Edward L. Keenan, 406-421, Cambridge University Press, Cambridge.
- Krifka, Manfred, Francis Pelletier, Gregory Carlson, Alice ter Meulen, Gennaro Chierchia, and Godehard Link (1995) "Genericity: An Introduction," *The Generic Book*, ed. by Gregory Carlson and Francis Pelletier, 1-124, University of Chicago Press, Chicago.
- Kuno, Susumu (1973) "Constraints on Internal Clauses and Sentential Subjects," *Linguistic Inquiry* 4, 363-385.
- Lambrecht, Knut (1994) *Information Structure and Sentence Form*, Cambridge University Press, Cambridge.
- Lawler, John (1973) *Studies in English Generics*, Doctoral dissertation, University of Michigan.
- Leech, Geoffrey (1983) *Principles of Pragmatics*, Longman, London.
- Nishida, Koichi (1996) "Arguments for the Heterogeneity of English *Be*," *Tsukuba English Studies* 15, 43-74.
- Nishida, Koichi (1997) "On the Indefinite Article of Predicate Nominals in English," *Tsukuba English Studies* 16, 155-188.
- Nishiyama, Yuji (1997) "Attributive Use and Non-Referential NPs," *Studies in English Linguistics: A Festschrift for Akira Ota on the Occasion of His Eightieth Birthday*, ed. by Masatomo Ukaji et al., 752-763, Taishukan, Tokyo.
- Perlmutter, David M (1970) "On the Article in English," *Progress in Linguistics*, ed. by Manfred Bierwisch and Karl Erich Heidolph, 233-248, Mouton, The Hague.
- Postal, Paul M. (1966) "On So-Called Pronouns in English," *Georgetown* 19, 177-206.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.
- Ross, John (1977) "Guess!," *CLS*, 515-544.
- Sadock, Jerrold M. and Arnold M. Zwicky (1985) "Speech Act Distinctions in Syntax," *Language Typology and Syntactic Description, Volume I: Clause Structure*, ed. by Timothy Shopen, 155-196, Cambridge University Press, Cambridge.
- Seki, Shigeki (1996) "WH-Gimonbun no Sitei-kankei ni tuite," *Jinbun Kenkyu* 48, Osaka City University, 129-143.
- Stampe, Dennis W. (1974) "Attributives and Interrogatives," *Semantics and Philosophy*, ed. by Milton K. Munitz and Peter K. Unger, 159-196, New York

University Press, New York.

Van Langendonck, Willy (1979) "Definiteness as an Unmarked Category,"

*Linguistische Berichte* 63, 33-55.

Ward, Gregory and Betty Birner (1995) "Definiteness and the English Existential,"

*Language* 71, 722-742.

Woisetschlaeger, Erich (1983) "On the Question of Definiteness in 'An Old Man's

Book'," *Linguistic Inquiry* 14, 137-154.

Yasui, Izumi (1988) "Eigo no Sosyobun nituite," *Gengo Bunka Ronshu* 25,

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