# GENERIC NOUN PHRASES IN ENGLISH

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## 1. INTRODUCTION

The purpose of this paper is to discuss the generic use of the English definite article *the*, the indefinite *a(n)*, and the zero article $\phi$. A typical example of this kind of use of articles can be illustrated by the following example:

(1) a. *The* dog is a mammal.
b. *A* dog is a mammal.
c. $\phi$ dogs are mammals.

In (1a-c) we have a generic use of *the*, a generic use of *a*, and a generic use of $\phi$ respectively. In (1), all the three sentences seem to express more or less the same idea and the three subject NPs all seem to refer to more or less the same thing, i.e. the species of dogs. This is different from the non-generic uses of articles. In sentences like the following:

(2) a. I saw *the* dog.
b. I saw *a* dog.
c. I saw $\phi$ dogs.

the three object NPs refer to quite different things. In (2a), the definite NP *the dog* refers to a particular dog "familiar" to both speaker and addressee. In (2b), the indefinite NP *a dog* refers to a specific dog "unfamiliar" to the addressee. In (2c), the indefinite plural *dogs* refers to some non-specific dogs.

Mass nouns, like count nouns, are also used to generalize over a whole class of entities. For example:

(3) a. Water is essential to life.
b. Gold is precious.
c. Snow falls.

(3) shows that we use the zero article with a mass noun to make a generalization over the class designated by the mass noun. (1) and (3) are typical examples of generic uses of articles. To generalize over a whole class of entities, for count nouns, we use either *a* or *the* followed by a singular form, or we use the zero article followed by a plural

fom, as shown in (1): for mass nouns, we use the zero article.

Comparing these forms with the non-generic uses of articles, we find two forms missing, i.e. "*the* + mass nouns" and "*the* +Ns". Do we use *the* with a mass noun in a general statement: Yes. We have sentences like:

(4) a. Mary is a girl who loves *the* water.
b. Iron is good for *the* blood.
(Bolinger, 1975, p. 181)

Do we use *the* followed by a plural noun to refer to a generality? Yes. We have sentences like:

(5) a. Most people enjoy *the* movies. (idem.)
b. *The* males are usualy stronger. (p. 183)

We see that all the forms of the non-generic uses of articles have their counterparts in generic uses. Is the generic use of articles related to the non-generic use in any way? How does the generic use of articles arise? What are the similarities and differences in meaning among these generic uses of articles? Furthermore, what are the restrictions on the distribution of these various generic NPs? Consider:

(6) a. Man invented the wheel/wheels/*a wheel in protohistoric times.
b. Defoe was an important figure in the development of the novel/*novels/*a novel.
(Allan, 1986, Vol. 2, pp. 139-40)

(7) a. *The mammal* suckles its young.
b. **The tree* gives off carbon dioxide at night.
(Huang, 1982, pp. 30-31)

We see some restriction on the distribution of the generic use of the definite article in (7), and also restrictions on the generic use of the idefinite article in both (6a) and (6b). In (6b), the zero article is not allowed, either. Why? These are the main questions to be addressed in this paper.

This paper is organized as follows. Section 2 discusses the generic use of $\phi$. Section 3 deals with the generic use of *the*. Section 4 is about the generic use of *a*. Finally, section 5 is a conclusion.

## 2. THE GENERIC USE OF THE ZERO ARTICLE

Carlson's work (1977, 1982, 1989) has made significant contributions to our

understanding of the semantics of English generic sentences, and particularly, what he calls "bare plurals", i.e. plural NPs without any determiner, such as *books* and *cats*.

Carlson (1977) distinguished two major uses of bare plurals. One is what is traditionally regarded as the plural counterpart of a singular NP determined by the singular indefinite article *a(n)*, such as *a book* and *a cat*. This use of bare plurals is found in sentences like the following:

(8) a. I had dinner with *friends* last night.
b. *Students* at Stanford University debated over a course called Western Culture.
c. *Cats* were put to sleep and they died two or three days later.

In (8), the underlined bare plurals all seem to have an "existential" reading, i.e., they all have essentially the force of *some*. Traditionally, this kind of bare plural is called the indefinite plural.

This use of bare plurals is different from the use we find in sentences like

(9) a. *Cats* are mammals.
b. *Dogs* bark.
c. *Birds* have wings.

In (9), the underlined bare plurals all seem to have a "universal" reading, i.e., they all have essentially the force of *all*. These bare plurals are traditonally grouped as generic NPs.

Carlson claimed that a bare plural itself is not ambiguous; the existential or universal reading of a bare plural can always be attributed to some aspect of the environment where it occurs. Consider:

(10) a. Dogs are barking in the backyard.
b. Dogs bark.

In (10a), we have an existential reading of the bare plural, and in (10b), the bare plural is generic. In (10b) the generic reading arises because the verb is in the present simple tense, which suggests that barking is a permanent or characteristic trait of the species of dogs. On the other hand, in (10a), the verb is in the present progressive form. The temporal aspect of the verb implies that the sentence is not a statement about some permanent property of the whole species and hence the existential reading arises.

We see that verb tense or aspect determines whether a bare plural is being used generically or not in cases like (10). In other cases like:

(11) a. Owls are awake.
b. Owls are intelligent.

we have a clear intuition that (11b) is a general statement about the species of owls whereas for (11a) we do not. The generic or non-generic sense of the bare plural is brought out by the respective adjectives. *Awake* denotes a fairly temporary property and hence the existential reading arises; whereas *intelligent* denotes a more permanent property and hence the generic reading arises. The former kind of adjective, including *hungry, drunk, available,* etc., are called "states" by Carlson. The latter, including *tall, fat, clever,* etc., he calls "properties". We see that in cases like (11), the nature of an adjective determines whether or not a bare plural is being used generically.

Carlson mentioned two more classes of predicates which can determine the generic or non-generic use of a bare plural. Consider:

(12) a. Hens are female chickens.
b. Hens are in the backyard.

Predicate nominals such as *female chickens* in (12a) refer to more permanent properties and hence select the generic reading; whereas locative prepositional phrases such as *in the backyard* in (12b) refer to temporary states and hence select the non-generic reading.

The main point of the above discussion of Carlson's 1977 work is that the generic use of the zero article is related to its non-generic use. The two uses of the same article are determined by the context where the bare plural occurs. Genericness is not inherent in the article itself; it is the predicate of a sentence that determines whether the subject NP has a generic use or not.

To sum up Carlson's insights on generics, a generic sentence with a bare plural as its subject attributes the predicate to the "kind" of thing designated by the bare plural. This generic use of a bare plural arises only when the predicate of a sentence denotes a more permanent or stable property, for example, a predicate in the simple present tense, not the progressive; adjectives denoting "properties" such as *intelligent*, not "states" such as *awake*; predicate nominals, not locative prepositional phrases. Without contexts such as these, bare plurals are to be interpreted as denoting some non-specific members of a kind of thing, not the "kind".

In Carlson's theory, the notion "kind" plays an important role. A kind of thing is different from just a set of things. Consider:

(13) a. Dogs are widespread.
b. Dogs that wag their tails at people are widespread
c. *Dogs that are running in the backyard right now are widespread.

In (13a), we have the species of dogs; in (13b), it is not the whole species of dogs, but a subset of the species, yet it is a kind of its own because wagging tails at people is a common characteristic of these dogs. In (13c), however, running in the backyard right now is a temporary state and not a permanent property of the dogs in question. Hence

these dogs only form a set of things, not a kind. *Widespread*, a "class predicate" which attributes a property to a kind, is thus disallowed.

To sum up this section, the form φNPs (the bare plural) can be generic or non-generic. A generic φNPs denotes a certain kind of thing, e.g. generic *dogs* denotes the kind, dog; whereas a non-generic φNPs denotes more than one unspecified member of a certain kind of thing, e.g. non-generic *dogs* denotes more than one dog which is "unfamiliar" to the addressee. Whether φNPs is used generically or non-generically depends on context. Let us assume without argument that φNPs is basically used non-generically. When it occurs in a special context, the generic use arises. The special contexts mentioned in this section include two kinds. In both, the form occurs in subject position. When the predicate of the sentence is a "class predicate" such as *widespread, numerous,* and *come in (different shapes or sizes)*, the subject φNPs is forced by the predicate to be interpreted generically. For example, when we say that horses are numerous, because of the semantics of *numerous*, in uttering that sentence, we cannot be talking about some specific or non-specific horses. Rather, we must be talking about horses as a kind and hence the generic use arises.

Secondly, the generic use of φNPs arises when the predicate denotes a property which can be characteristic of a whole class. Such predicates include "property" adjectives like *intelligent*, as opposed to "state" adjectives like *awake*, and predicate nominals as in "Dogs are *mammals*", as opposed to locative prepositional phrases as in "Dogs are *in the backyard*". Predicates in the simple present tense, as opposed to the progressive, can also be a trigger of the generic use of φNPs. In brief, when what the predicate denotes is not limited to a certain (period of) time or space, the generic use arises. For example, when we say that owls are awake, it is impossible that all owls, including all the owls in the actual world and owls in any possible world, are awake at the same time. In contrast, when we say that owls are intelligent, the statement may not be true, but it is possible that all owls, i.e. members of the kind, owl, are intelligent. In other words, the generic interpretation of *owls* is available due to the semantics of the predicate *intelligent*.

Up to this point we have been assuming that the non-generic use of φNPs can occur in any context except for those special contexts mentioned above where the non-generic sense of φNPs disappears and the generic use arises. When φNPs is forced to be interpreted generically by a predicate, it must denote a kind. If it does not, a semantic anomaly arises. This is why (13c), repeated here, is bad. If we substitute a "state" adjective like *hungry* for the "class" predicate *widespread*, as shown in (13d), the sentence is well-formed.

(13) c. *Dogs that are running in the backyard right now are widespread.
d. Dogs that are running in the backyard right now are hungry.

Here we see a distributional restriction on the generic use of φNPs, i.e. when the predicate is a class predicate, the subject of the form "φNPs which Y's" must

denote a kind, not only a set of things.

## 3. THE GENERIC USE OF THE DEFINITE ARTICLE

It was noted above that in subject position, a generic sense of the zero article arises when the predicate has a "characteristic" reading. In an unambiguous context such as

(14) Horses work hard.

the verb is in simple present tense; we have only a "characteristic" reading of the predicate, not an "event" reading. In this context, *horses* is unambiguously generic.

How about the definite article *the* in this context? Consider:

(15) The horse works hard.

In (15), the definite article *the* is ambiguous. It can be either specific or generic. In its specific sense, *the horse* refers to a particular horse mutually known to speaker and addressee. In its generic sense, *the horse* refers to the species of horses.

In subject position, the generic sense of *the* arises in the same environments as those where the zero article is used generically. For example:

(16) a. The lion is awake.
b. The lion is courageous.

(17) a. The tiger is in the cage.
b. The tiger is a dangerous animal.

(18) a. The cow is giving milk.
b. The cow gives milk.

All the subject NPs in the (a) sentences are non-generic; whereas in the (b) sentences, on the prominent reading, all the subject NPs are generic. In (16b) we have a "property" adjective, *courageous*, as opposed to a "state" adjective, *awake*. In (17b) we have a predicate nominal, *a dangerous animal*, as opposed to a locative prepositional phrase, *in the cage*. In (18b) we have the present simple tense as opposed to the progressive. These are generic environments.

Is there any difference in meaning between generic *the* and generic $\phi$? Bolinger (1975) noted that there are two ways to refer to a generality by uisng a plural noun. One is to use a bare plural and the other is to use a definite plural. His

examples are (p. 181):

(19) a. Airlines charge too much.
b. The airlines charge too much.

(20) a. Generals usually get their way.
b. The generals usually get their way.

Bolinger remarked that in (19a), *airlines*, being indefinite, refers to all and any airlines; if it is an airline, it will charge too much. This is similar to Carlson's position. *Airlines*, a bare plural, refers to a kind of thing. Any and all airlines will charge too much by virtue of being airlines. In (19b), *the airlines*, being definite, refers to "those actually in existence, out there in the world, forming a subclass of common carriers" (p. 181). Similarly, in (20a), *generals* refers to all generals, extant and those yet to come; whereas in (20b) *the generals* refers to those actually existing in the world, forming a subclass of officers.

Bolinger's main point is that the definite article here is to "single out (make definite) the thing mentioned against the background of a more inclusive whole" (p. 181). Hence when we say "The males are usually stronger", we view males as a subclass of a class that also includes females. And when we say "Candy is not good for the teeth", we refer to the teeth of the human body. Mass nouns act like plurals. When we say "Iron is good for the blood", we refer also to the blood of the human body.

Bolinger said that this view of a larger whole as a backdrop is also true of definite count singulars when used to generalize. Consider:

(21) a. The hens lay eggs.
b. The hen lays eggs.

The larger whole here is all the domestic animals. According to Bolinger, the difference between (21a) and (21b) is that the plural form *the hens* refers to the totality of a subclass of domestic animals and the singular form *the hen* refers, not to the totality of the subclass, but to a single item which is taken to represent the subclass. In the generic sense, *the hen* refers to an abstract typical hen, not a particular one.

I have found that the difference between generic "*the* N" and "*the* Ns" is not as simple as Bolinger suggested. Burton-Roberts (1976, p. 442) claimed that (22) does not have a generic interpretation.

(22) The beavers build dams.

I think that a generic interpretation for (22) is hard to get for most people because it takes a special context to be interpreted generically. (22) needs to be viewed in a picture where beavers' building dams is contrasted with other rodents' peculiar activities,

which are incidently not easy to think of. By contrast, in a sentence like

(23) The cows give milk.

if it is viewed with a picture of a farm where the cows give milk, the hens lay eggs, and the horses haul carts, etc., then a generic interpretation for (23) arises. Note that for singular definites, however, such a demand for contrasting is not so strong. For example:

(24) a. The cow gives milk.
b. The beaver builds dams.
c. The lion is the king of beasts.

In (24) so long as the subject NPs denote a well-defined species, they can be readily interpreted generically without a strong demand for a contrast with other species within the same larger class.

Vendler (1967) has a different way of saying almost the same thing as Bolinger with respect to generic *the*. He claimed that "the definite article always presupposes a restrictive clause" (p. 56). For example:

(25) a. I saw a man. *The* man [that I saw] wore a hoat.
b. A man keeps bothering me. I hate *the* man [who keeps bothering me].

(26) a. *The* [animal that is a] tiger lives in the jungle.
b. The Incas did not use *the* [instrument that is a] wheel.
(ibid., pp. 56-7)

In (25) we have non-generic *the* to pick out a particular individual; whereas in (26) we have generic *the* to single out a representative of a class. Vendler argued that a restrictive clause is anecessary condition for both uses of *the*. In the generic use, this means that a larger class is presupposed and the referent of the definite generic NP is a subset of this larger class. The genus of tigers is a subset of the genus of animals and so are wheels to instruments.

According to Vendler, the generic use of *the* requires a superior genus. This requirement is similar to Bolinger's suggestion that generic *the* needs an appropriate backdrop, a larger whole. Lacking such a background, a definite NP has only a non-generic interpretation. For example:

(27) a. Objects are in sapce.
b. The object is in space.
(Vendler, 1967, p. 57)

(27a) is a generic sentence but (27b) is not. *The object* in (27b) can only refer to a

particular object, not a representative of the genus of objects because it does not fall under a superior genus.

A superior genus or a backdrop is a necessary condition for the use of generic *the*. It explains the use of *the* in cases like the following:

(28) a. This book is written for *the* [person who is a] mathematician. (Vendler, 1967, p. 57)
b. There are two kinds of large cat living in Paraguay, *the* [kind of large cat that is a] jaguar and *the* [kind of large cat that is a] puma. (p. 58)

However, this condition is not a sufficient one. It does not rule out cases like:

(29) a. *Bill likes to drive *the* [vehicle which is a] sports car when he gets a chance. (Lawler, 1973, p. 114)
b. *On Mother's Day, people wear *the* [flower which is a] carnation in their lapel.

Why is generic *the* blocked in sentences like (29)? Both sentences in (29) are habitual sentences. The referents of both nouns, *sports car* and *carnation*, fall under a superior genus, vehicles and flowers, respectively. And intuitively, we can say things like:

(30) a. Bill likes to drive a kind of car called 'sports car' when he gets a chance.
b. On Mother's day, people wear a kind of flower called 'carnation' in their lapel.

One thing clear is that in object position, generic use of *the* does not require that it occur in a generic or habitual sentence. For example, we have sentences like:

(31) a. Man invented *the* wheel in protohistoric times.
b. Euclid described *the* parabola. (Vendler, 1967, p. 58)
c. In a TV interview, Saul Bellow talked about *the* novel.

In (31), all the verbs are in the past tense and further we have specific time adverbials, *in protohistoric times* in (a) and *in a TV interview* in (c). All these indicate that the sentences here are not generic sentences. However, the use of *the* in all three cases is generic because none of the definite NPs refer to a particular entity; instead they denote a "kind".

Bolinger (1975, p. 184) has the following to say about the generality of a noun in object position:

> It is a fact that when a noun is object of a verb or is some other kind of complement, it is far more often than not partitive rather than general. In a sentence like *He eats sweets* or *They haul coal* it is pretty clear that he eats only the sweets he eats, not sweets in general, and they haul just what coal they can load on their trucks, not coal in general.

Bolinger classified verbs like *eat* and *haul* as "manipulative" verbs. They involve physical actions. Bolinger said, "we can act only on so much of it as we can reach or manipulate" (p. 184). He noted, however, there are some contexts in which a manipulative verb may be used in a non-manipulative sense. For example:

(32) a. Why do you (always) spend money like that?
b. I saw him spending money.
(ibid.)

In (32a), the verb *spend* is used in a non-manipulative sense; the sentence means 'Why are you so wasteful of money?' In (32b), *spend* is used in a manipulative sense; the use of the progressive indicates that the action is manipulative.

In (29), repeated here:

(29) a. *Bill likes to drive *the* sports car when he gets a chance. (generic *the*)
b. *On Mother's Day, people wear *the* carnation in their lapel.

we have two manipulative verbs, *drive* and *wear*. *Drive* and *wear* involve physical actions; Bill drives only the sports cars he can reach, not sports cars in general and people wear only the carnations they wear, not carnations in general.

On the other hand, in (31), repeated here:

(31) a. Man invented *the* wheel in protohistoric times.
b. Euclid described *the* parabola.
c. In a TV interview, Saul Bellow talked about *the* novel.

we have verbs of a different nature. When we drive or wear something, we actually do something to it, but when we describe or talk about something, we do not. I think they can be used in a non-manipulative sense. Saul Bellow could talk about the kind, Novels, and Euclid could describe the kind, Parabolas, but Bill cannot drive the kind, Sports Cars, and people cannot wear the kind, Carnations. If we turn the definite generics in (31) into bare plurals, we can have a different meaning of each sentence.

(31') a. Man invented wheels in protohistoric times.
b. Euclid described parabolas.
c. In a TV interview, Saul Bellow talked about novels.

(31a) talks about the invention of the wheel against other human inventions; (31'a) does not have such an implication. Further, in (31a) *the wheel* implies the kind, wheel, whereas in (31'a) *wheels* implies various forms of wheels such as cart wheels and vagon wheels. It is clear that (31b) implies that Euclid described a kind of curve that is a parabola; what he described was the kind of thing itself. In (31'b), however, it may

(36) It is always helpful to ask *the* librarian if you have any question on reference books.

Generic *the* is possible in (36), but without a special context, it is not possible in

(37) When you abslutely positively have to know, ask *the* librarian.

As a message from a public library printed on a bookmark, *a* is a better choice than *the* in (37). In (37), the verb *ask* occurs in a command. I think the use of a command is a clear indication that the verb is used in a manipulative sense.

In sum, the generic use of *the* requires a superior genus or a larger whole for the NP at issue, but if the NP is the the object of a verb which is used in a manipulative sense, generic *the* is disallowed. Manipulative verbs involve physical actions. The contexts in which a verb is used in a manipulative sense include the use of a progressive, a command, and a simple present tense. On the other hand, the indication of a non-manipulative sense of a verb includes the use of infinitives which serve as a a subject as in (36) or as a predicate complement as in (35b) or are interpretable as 'in order to'.

The zero article, however, is allowed with either the manipulative or the non-manipulative use of a verb. In the cases of (33) and (34), bare plurals are allowed in all four cases, as shown in the following:

(38) a. To hunt *elephants*, you need special guns.
b. John is hunting *elephants*.

(39) a. Their task is to eradicate *wolves*.
b. John eradicates *wolves*.

In the (a) sentences, the underlined NPs have a generic sense: whereas in the (b) sentences, the underlined NPs are indefinite non-generic plurals. (For more detailed discussion of generic objects, see Laca, 1990.)

I now turn to another point about generic *the*. It is frequently mentioned in the literature (e.g. Quirk, et al., 1972, and Lawler, 1973) that definite generics, like ordinary definite NPs, carry existential presuppositions. It is true that a difference between the sentence *Horses work hard* and the sentence *The horse works hard* is that the indefinite generic *horses* refers to any and all horses or the species of horses; by virtue of being horses they (normally) work hard; whereas the definte generic *the horse* refers to an item which is taken to be representative of the horses existing out there in the world, forming a subclass of domestic animals. However, the existential presupposition requirement does not rule out sentences like:

(40) a. The unicorn is a popular theme in children's literature.
b. The unicorn cleans water with its horn.
c. The dragon is a symbol of nobleness in ancient China.

well be some non-specific parabolas that he described. Similarly, in (31c), *the novel* implies novels as a literary genre whereas in (31'c), *novels* can refer to some non-specific novels that Saul Bellow talked about.

The point here is that the manipulative sense of a verb blocks the generic use of *the* with its object. If a verb is used in a non-manipulative sense, generic *the* is possible; if it is used in a manipulative sense, generic *the* is impossible. For example:

(33) a. To hunt the elephant, you need special guns.
b. ?John is hunting the elephant.

(34) a. Their task is to eradicate the wolf.
b. ?John eradicates the wolf.

(Bolinger, 1975, p. 182)

We can infer that (33a) is about elephants as a class because the sentence means that to hunt a typical elephant out there in the world, you need special guns. In contrast, this generality cannot be inferred from (33b). It does not have a reading according to which John is hunting a typical elephant. Similarly, (34a) expresses an idea that "individualizes the noun as representative of its class" (Bolinger, 1975, p. 182); whereas (34b) dos not. Why so?

Note that the generality inference of (33a) and (34a) is made possible by the infinitive. In this untensed form, both verbs are used in a non-manipulative sense and hence generic *the* is allowed. By contrast, in (33b) we have the progressive, and hence John must be hunting some specific or non-specific elephants. In (34b) we have the simple present tense, and as before, John eradicates only the wolves he can manipulate, not wolves in general. In both cases, the verb is used in a manipulative sense and hence generic *the* is disallowed.

Note also that the infinitives in (33a) and (34a) are different from that in (29a), repeated here:

(29) a. *Bill likes to drive *the* sports car when he gets a chance. (generic *the*)

In (29a) the infinitive serves as the complement of the verb *likes*; in (33a) the infinitive can be interpreted as 'in order to' and in (34a) the infinitive is a predicate complement. Generality cannot be inferred in the former case, but it can in the latter two cases. Although (29a) is bad, (35) is not:

(35) a. To drive *the* sports car, you need special skills.
b. Their task is to improve *the* sports car.

Besides the above two cases, generality can also be inferred when an infinitive serves as the subject of a sentence. For example:

Although unicorns and dragons do not exist in the real world, they exist in a world of imagination. This world of imagination is presupposed to be part of our world knowledge. Since unicorns and dragons are well-defined species in stories, they have a definite generic form like natural species such as horses and snakes.

Generic *the*, nevertheless, does have a restriction that generic $\phi$ does not have. Carlson (1983, 1985) points out that a non-natural kind term does not have a definite generic form. For example:

(41) a. Dandelions are widespread.
b. The dandelion is widespread.

(42) a. Weeds are widespread.
b. *The weed is widespread.

Dandelions are a well-defined natural species, but weeds involve a variety of species memberships; they themselves are not a natural kind.

In discussing the generic use of English articles, Huang (1982, pp. 30-31) fails to give a straightforward rule for the use of the generic *the*, giving the following data:

(43) a. The robin eats bugs.
b. The hipponpotamus lives in water.
c. The lemur is smaller than the gorilla.

(44) a. The insect is well-protected by an external skeleton.
b. The mammal suckles its young.
c. The Watusi is taller than the pygmy.

(45) a. *The ruminant has cloven hoofs.
b. *The primate is larger than the crustacean.
c. *The tree gives off carbon dioxide at night.

Here we need some technical knowledge of the classification of animals and plants. The hierarchical classification is as follows: Kingdom, Phylum, Subphylum, Class, Subclass, Order, Family, Genus, and Species. In (43), robins, hippopotamuses, lemurs, and gorillas are all well-defined species; similarly, in (44a-b), insects and mammals are well-defined classes. As for (44c), the Watusi and pygmies both belong to the human species. We know that the Watusi are particularly tall people in Africa and pygmies are poeple of unusually small size.

By contrast, in (45a), ruminants are not a well-defined class or species; it falls under the order Ungulates which includes several unrelated species of mammals such as camels and cattle. Similarly, in (45c), trees include different species which fall under a variety of orders, families, and genera. In this sense, trees, like weeds, are not a well-

defined natural kind term. As for (45b), it's well-known that man bleongs to the order Primates, whereas crustaceans are grouped as a subphylum. Hence primates and crustaceans do not share he same status in the hierarchy.

The contrast of the grammaticality shown in (43) and (44) on the one hand, and (45) on the other, suggests that language users unconsciously follow the general principle for the use of generic *the*: Definite generic *the* is allowed only for well-defined terms. This is true not only of natural kind terms, but also of artifacts, as shown in:

(46) a. *The road is wirder than the footpath.
b. The well-made road is a pleasure to drive on.
c. The steam engine uses water and coal.
d. The bicyle is slower than the car.

(Huang, 1982, pp. 30-31)

In (a), the word "road" is too general; whereas in (b), with the restrictive modifier the subject NP is better-defined. And in (c-d), steam engines, bicycles and cars are all well-defined artifacts.

Furthermore, consider:

(47) a. Dogs that wag their tails at people are widespread.
b. ?The dog that wags its tail at people is widespread.

(48) a. Birds that eat fish are widespread.
b. ?The bird that eats fish is widespread.

Dogs and birds are natural kinds, but dogs that wag their tails at people and birds that eat fish are not. It was noted above that generic *the* presupposes existence; and further the predicate *widespread* applies only to "kinds". Given this, the (b) sentences imply that dogs that wag their tails and birds that eat fish are two well-defined natural species already existing out there in the world. But they are not. They are kinds set up by the descripton of the sentence. And in fact we can have sentences like:

(49) a. The dog that wags its tail at people is generally friendly.
b. The bird that eats fish generally has a long beak.

We can create kinds of things by description and attribute some characteristic properties to the kinds that we create.

In brief, generic *the* is blocked in a sentence with a "kind" predicate such as *rare, common,* and *widespread* that applies only to kinds, if the subject term does not designate a natural kind. Generic $\phi$, however, is not subject to this restriction.

To sum up this section, like $\phi$NPs (the bare plural), both the form "*the* N" and "*the* Ns" can be either generic or non-generic. Non-generic "*the* N" denotes a particular

enity known both to speaker and addressee. Non-generic "*the* Ns" denotes inclusively all the entities in the relevant domain of interpretation. On the other hand, generic "*the* N (a count noun)" denotes an item which is taken as representative of a subclass of a larger class. Generic "*the* Ns" or generic "*the* N (a mass noun)" denotes the totality of a subclass of a larger class, and usually demands a contrast with other subclasses of the same larger class.

Let us assume again that the non-generic use is the basic and the generic use arises only in special contexts. In this section, three environments were metioned where the generic use of "*the* N" arises. First, like the bare plural, when it co-occurs with a class predicate, the generic use arises. In this environment, the noun must be a natural kind term. For example, we say "The ladybug is common", but we do not say "The bug is common" because *ladybug* is a natural kind term, but *bug* is not.

Secondly, the generic use of "*the* N" arises when it co-occurs with a predicate which denotes a property distinctive of the whole class designated by the noun. If the property is not distinctive of the whole class, "*the* N" can only be interpreted non-generically. For example, when we say "The cow gives milk", it is possible that we are talking about a particular cow, and it is also possible that we are talking about the spcies of cows. In contrast, when we say "The cow eats hay", the sentence can only be interpreted non-generically, i.e. a particular cow known both to sepaker and addressee eats hay. The generic interpretation is not available because eating hay is not a distinctive propery of all cows.

In the two environments above, "*the* N" occurs in subject position. The generic use of "*the* N" also occurs in object position. When a verb is used in a non-manipulative sense, its direct object, "*the* N", can be interpreted generically. For example, when we say "In a TV interview, Saul Bellow talked about the novel", it is possible that we are referring to a particular novel known both to speaker and addressee. And it is also possible that we are referring to a literary genre, the novel. On the other hand, if a verb is manipulative, its object does not have a generic interpretation because normally we cannot manipulate a whole class of thing. Thus we do not say sentences like "People wear the carnation on Mother's Day". And when we say "John likes to drive the sports car", the sentence can only mean that John likes to drive a particular sports car known to both speaker and addressee. The generic interpretation of *the sports car* is not available in that sentence.

The plural definite, "*the* Ns", is used non-generically in most cases. Its generic use arises in the same environments as that of the signular definite, *the* N. Both the plural and the singular definite, when used generically, require a higher genus as a backdrop. However, when we say, for example, "The cows give milk", it needs to be viewed as a contrast to "The hens lay eggs; the horses haul carts, etc". Without this contrast, the generic sense of the plural definite can hardly arise.

## 4. THE GENERIC USE OF THE INDEFINITE ARTICLE

It was noted above that a generic sense of the zero article or the definite article arises if it occurs with a subject term and the predicate attributes a characteristic property to the subject. In object position, a generic sense of the definite article arises if the verb is used in a non-manipulative sense. Some tested cases are:

(50) a. Horses work hard.
b. The horse works hard.

(51) To hunt the elephant, you need special guns.

How about the indefinite article *a(n)*? When does a generic sense of this article arise? Consider:

(52) a. A horse works hard.
b. To hunt an elephant, you need special guns.

What interpretations does (52a) have? Is *an elephant* in (52b) generic?

Burton-Roberts (1976) argued that in subject position a generic NP determined by *a* is derived from a subjectless predicate. Thus he claimed that (53a) is derived from (53b):

(53) a. A whale is a mammal.
b. To be a whale is to be a mammal. (p. 430)

He claimed that generic NPs determined by *a* are like predicate nominals (e.g. John is *a teacher*) in that they both are non-referring; they both represent abstract concepts, not objects. Hence generic *a* is about what constitutes membership in a class, not about the class itself.

This point can be further illustrated by an example provided by Dahl (1975, p. 108):

(54) *A member* of this club does not drink whisky; hence, since you will now be accepted as a member, you will have to stop drinking.

Using *a*, the first clause of the above sentence states that "there is an obligation for members of the club not to drink whisky, or at least that it is expected of them that they will not drink whisky" (p. 108). Given this interpretation, (54) is a valid argument. Note that (54) can be paraphrased as:

(54') To be member of this club is to not drink whisky; hence...

Lawler (1973) noted that generic *a* is most natural in definitional sentences. He gave us examples like:

(55) a. A madrigal is polyphonic.
b. *A madrigal is popular. (generic *a*)
(p. 112)

To be a madrigal is necessarily to be polyphonic, but to be a madrigal is not necessarily to be popular. (55b) implies that popularity naturally comes to a madigal just because of its class membership. Numberg and Pan (1975, p. 415) noted that although (55b) is not acceptable, (56) is not problematic:

(56) A football hero is popular.

If a person is a football hero, he is popular. Popularity is a natural result of being a hero.

From the discussion above we see that it seems to be generally agreed that generic *a* is about class membership. This sense of the indefinite singular article arises when it occurs with a subject term, and the predicate attributes to this subject a property which is a natural result of class membership. Sentences with this use of *a* state that the property denoted by the predicate is an automatic and hence necessary property of the subject by virtue of its being a member of the class designated by the subject term.

With this in mind, let us return to (52a), repeated here:

(52a) A horse works hard.

Like the definite article in this context, *a* is ambiguous. It can be either specific or generic. On the specific reading, (52a) states that a particular horse known to the speaker but not to the addressee works hard. On the generic reading, it states that working hard is a necessary property of being a member of the species of horses.

Now I turn to (52b), repeated here:

(52b) To hunt an elephant, you need special guns.

What is the status of *a* in object position? It was noted in the preceding section that generic *the* is blocked with manipulative vers. We discussed cases like (29), repeated here:

(29) a. *Bill likes to drive *the* sports car when he gets a chance. (generic *the*)
b. *On Mother's Day, people wear *the* carnation in their lapel.

Although generic *the* is not allowed, we can have *a* in these cases, as shown in (29'):

(29') a. Bill likes to drive *a* sports car when he gets a chance.
b. On Mother's Day, people wear *a* carnation in their lapel.

In cases like these, *a* is clearly non-generic; rather, in (29'a) it is either specific or non-specific and in (29'b) it is non-specific. In the previous section, we also noted that generic *the* is possible if a verb is used in a non-manipulative sense. We discussed cases like (31), repeated here:

(31) a. Man invented *the* wheel in protohistoric times.
b. Euclid described *the* parabola.
c. In a TV interview, Saul Bellow talked about *the* novel.

If we turn *the* into *a*, we have:

(57) a. ?Man invented *a* wheel in protohistoric times.
b. Euclid described *a* parabola.
c. In a TV interview, Saul Bellow talked about *a* novel.

In these cases, *a* is specific. (57a) states that man invented a specific wheel in protohistoric times; (57b) states that Euclid described a particular parabola; and (57c) states that Saul Bellow talked about a particular novel in a TV interview. Hence we see that as the direct object of a verb, "*a(n)* N" cannot be generic. Instead, it is either specific or non-specific.

So far we have discussed the genericness of "*the* N", "*a(n)* N", and $\phi$NPs as subject NPs and as direct objects of verbs. Now I turn to a discussion of these NPs as the object of a preposition. In a general statement such as:

(58) Yet until now much of the work in this field has not been easily accessible to *the* student, and often written at an intimidating level of technicality.
(Cambridge Textbooks in Linguistics, *Pragmatics*, 1983, back cover)

we can substitute *students* for *the student*, but *a student* would not as good as the other two forms.

This does not mean that only "*the* N" and $\phi$NPs, but not "*a(n)* N", can be used when they occur as the object of a preposition. Consider (6b), repeated here, and (59):

(6b) Defoe was an improtant figure in the development of the novel/*novels/*a novel.

(59) a. This book is suitable for the first grader.

b. This book is suitable for first graders.
c. This book is suitable for a first grader.
(Abbott, p.c.)

(6b) shows that φNPs or "*a(n)* N" sometimes cannot occur in this position, but (59) shows that in this position, "*a(n)* N" sometimes can readily occur, just like the other two forms.

In (6b), we talk about a particular literary genre and hence generic *the* is the most appropriate. How do we explain (59)? If I say that the bare plural in (59) is not generic, the reader might object to it because it obviously denotes first graders in general. I'd argue that the indefinite plural use of *first graders* here denotes an unspecified number of first graders and this number is so big as to amount to the whole class of first graders.

How about the status of "*a(n)* N" in this position? If we define generic "*a(n)* N" as denoting class membership, *a first grader* in (59) is clearly not generic. Instead, it is non-specific, denoting an unspecified first grader and in this particular context, it amounts to any first grader.

In sum, as the object of a preposition, "*the* N" can be generic when the context requires it whereas the bare plural or "*(a)n* N" cannot. However, the bare plural can be interpreted as denoting an unspecified number of objects and this number can be so big as to amount to the whole class and thus it achieves a general use. Similarly, "*a(n)* N" can be non-specific and by denoting an unspecified object it can be taken as meaning 'any N' and thus achieves a general use.

Although generic *a* has a quite restricted distribution, non-specific *a* is widely used in general statements where generic *the* would not be as appropriate. For example:

(60) *A* student who has been on an F-1 visa for eight consecutive years must apply for an extension of stay.
(*News and Notes* 16:1, 1987, Michigan State University)

The use of *a student* here is better than *the student* because applying for an extension of stay requires individual actions; the use of generic *the* (meaning 'the kind of student') implies that this kind of student as a group must do something. Again, *a* is paraphrasable as *any* in (60).

To sum up this section, the form "*a(n)* N" can be used either generically or non-generically. Non-generic *a(n)* N can be either specific or non-specific. Specific *a(n)* N denotes a particular entity known to the speaker but not to the addressee; non-specific *a(n)* N denotes an unspecified entity. Generic *a(n)* N denotes membership in a class. The generic use of *a(n)* N arises only in subject position. We have a generic use of *a(n)* N when it occurs with a predicate which denotes a necessary property of the class designated by the noun. Thus it is most appropriate in a definitional sentence.

## 5. CONCLUSION

When an NP determined by the zero article or *the* or *a* is used generically, it does not refer to a specific or non-specific item; rather it denotes smoething more or less on an abstract level, a "kind" of thing, or an item which is taken to be reprepresentative of a class, or class membership. The three articles are interchangeable in cases like (1), repeated here:

(1) a. *The* dog is a mammal.
b. *A* dog is a mammal.
c. $\phi$ dogs are mammals.

However, they have their own distributional restrictions. Among the three articles, generic use of the zero article has the least restrictions.

When the predicate of a generic sentence is a "class" predicate such as *rare, common, widespread,* and *extinct* the zero article is allowed, but the article *a* is completely blocked because a generic NP determined by *a* does not refer to a class itself. With a "class" predicate, the definite article is possible for an NP that designates a "natural" kind, but impossible for a kind that involves a variety of species memberships (e.g. weeds, bugs) or a kind that is created by the descritpion of the sentence itself. Thus we have:

(61) a. Dogs are common.
b. *A dog is common.
c. The dog is common.
d. *The dog that bites people is common.

(62) a. Dandelions are common.
b. The dandelion is common.
c. Weeds are common.
d. *The weed is common.

In generalizing over a kind of thing, bare plurals allow the predication of properties which hold only on a statistical basis, but for definite generics the properties attributed to them must be distinctive of the whole class. Thus we have:

(63) a. Cows give milk.
b. The cow gives milk.

(64) a. Cows eat hay.
b. ?The cow eats hay.

In object position, bare plurals or indefinite singulars are allowed if a verb is used in a manipulative sense, but definite generics are blocked. On the contrary, if a verb is used in a non-manipulative sense, *the* is the most appropriate. Thus we have:

(65) a. Bill likes to drive {a sports car, sports cars, *the (generic) sports car} whenever he gets a chance.
b. Euclid described {the parabola, ?a parabola, ?parabolas}.

Generic *a* is limited to subject position, but non-specific *a*, joining generic *the* and $\phi$, is widely used in general statements. Thus we have:

(66) There are sensible exercises to most chapters, and adequate references for {the reader, readers, a reader} who want(s) to go deeper.
(Cambridge Textbooks in Linguistics, *Logic in Linguistics*, reprinted 1986, back cover)

If L2 learners know the general properties of generic sentences and the subtle differences among genric NPs determined by *the, a* and the zero article, they will have better guidance in making choices of articles. If they know the distributional restrictions for each article, they can avoid a wrong choice.

## NOTE

* I am indebted to Barbara Abbott and Ruth Brend for their native intuitions and helpful comments.

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