

CHAPTER IV
GENERIC NOUN PHRASES

The term "generic" has been used to describe a wide variety of noun phrases, as well as being descriptive of verbal constructions of various sorts. We will here attempt to categorize the types of noun phrases in English which merit description as "generic", and then discuss various analyses.

One of the most common sorts of NP generics is that characterized by Stewart (1971) as the type.¹ In English, this has the form of a definite singular noun phrase, frequently without much in the way of modifiers. Some examples:

- (1) The tiger is found in India.
- (2) The military mind works in mysterious ways.
- (3) The unabridged dictionary is quite large and expensive.
- (4) The telephone is a great aid to syntacticians.
- (5) The university is no place to fight a war.
- (6) The dandelion is my favorite weed.
- (7) Edison invented the electric light.
- (8) Contact with Europeans killed the Tasmanian.
- (9) It is necessary to give the foot soldier his proper place in military history.
- (10) Many Americans regard the attaché case as a symbol of white-collar employment.

As can be seen, there is no requirement that these generic NPs (which we will call "definite generics" from the definite article they contain) be subjects, although they probably occur more frequently in subject position than in any other. There are a great number of facts and interactions to be noted here.

First, note that definite generics are both syntactically and semantically singular. The agreement phenomena in (1)-(6) and the singular pronoun of (9) attest to the syntactic singularity of the generic. But definite generics are also singular in meaning (for the most part)² since they produce anomalies when used with predicates such as decimate, die/kill off, dwindle, etc. which require semantic plurality.

(11) ?*Europeans decimated the purple wombat.

(12) ?*The purple wombat died off **slowly**.

(13) *The purple wombat is dwindling.

(14) *The purple wombat is extremely numerous.

(Although it is possible to use other predicates which seem to have something to do with plurality:

(15) The purple wombat is rare/common.

(16) The purple wombat is gradually dying out/*off.

(17) After its introduction to the New World, the
 horse increased $\left. \begin{array}{l} \text{its numbers rapidly} \\ \text{in number(s) rapidly} \\ \text{rapidly in number(s)} \end{array} \right\}$
 until it spread all over the plains.)

The fact of the definite generic's singularity should not be surprising on morphological grounds, but it makes things a bit harder for the semanticist, since the most

obvious semantic fact about this type of generic is that it (somehow) makes reference to a number of items. Thus, the purple wombat makes sense as a generic only if there are two or more purple wombats, and anything said of the generic is somehow to be understood as referring to each (or all) purple wombat(s).

Second, when the definite generic is the subject of the sentence, the verb must be either stative or generic. Note the distinction between (18)a and b:

- (18)a The opossum hangs by its tail.
- b *The opossum hangs by its tail this afternoon.

In (18)b, the specific time adverb forces a non-generic interpretation, which makes the sentence with a definite generic subject unacceptable. There are a number of generic verbal usages which show up here: note (19) and (20):

- (19)a The machine-gun killed cavalry charges.
- b *The machine-gun killed Harry.
- (20)a The rhinoceros is destroying the crops in Uganda.
- b *The rhinoceros is destroying the crops in my garden.
- c The rhinoceros leaf-hopper is destroying the crops in Uganda/my garden.

(19) is an interesting datum for a number of reasons: the use of kill is strange, somehow, as (19)b shows--it does not mean biological death, as one might expect from the verb used with a weapon as subject; the meaning of the generic seems to refer to the introduction or use of the machine-gun, rather than its normal usage of referring to a quality possessed by all or every machine-gun. With some effort, one can get a good reading for (19)b, wherein

Harry is said to have died because of the introduction of the machine-gun, possibly because he was an old cavalryman who liked charges. (20) is even more interesting; note the necessity of taking into account the size of the locative in relation to the size of the individual member of the species characterized by the generic. It makes no sense to blame the depredation of my garden on a species whose individual members are almost as large as my garden, since the requirement of genericity means that a large number of acts of destruction of crops must be involved, and these must involve different rhinoceri. Such a possibility exists with the leaf-hopper, which is very small in relation either to Uganda or my garden, and therefore it is reasonable to contemplate numerous acts of destruction, involving many leaf-hoppers, in either place. It is also instructive to note that this process is productive only with certain verbs. The use of the progressive to refer generically to a number of actions is well-established and quite common,³ but for some reason, (21) and (22) are odd, even though they are superficially similar to (20)a:

(21) *The lion is biting the children in Uganda.

(22) *The linguistics student is swallowing lexicalism at MIT.

(As we will see below, these are good with plural generics). What, if anything, this tells us about the proper way to analyze generic verbs, is open to question; something, however, is obviously lacking in our understanding of these phenomena.

The presupposition of existence which normally attends

a definite description seems to be present in definite generics as well, although there seem to be some exceptions, notably definitions:

- (23) *The angel plays the harp.
- (24) ??The unicorn eats lilies.
- (25) The unicorn is a mythical beast resembling
 {the horse (*with a single horn).}
 {a horse (with a single horn). }

It is apparently all right to definitize something if you define or otherwise identify it in the same clause, but not all right if something non-definitional is predicated of it. The reduced severity of (24) seems to be due to some doubt as to whether eating lilies is a property or an accident; there is no doubt in (23) or (25).

There are many more extremely interesting properties of definite generics, but we will be most interested in the ways in which they contrast with the other forms of the NP generic, so we will defer further discussion until the forms can be compared directly.

Just as there is a generic with a definite article, there is one with an indefinite article, as well. This, like the definite generic, is both syntactically and semantically singular, and tends to be encountered without very much in the way of modification.

Some examples:

- (26) A madrigal is polyphonic.
- (27) A lexicalist believes in interpretive rules.
- (28) A generative semanticist would spurn that solution.

- (29) A linguist should, many believe, study language objectively and scientifically.
- (30) Frank likes to drive a sports car as often as he gets a chance.
- (31) A telephone can be either a help or a nuisance.
- (32) A good man is hard to find.
- (33) A koala eats eucalyptus leaves.
- (34) A man's a man.
- (45) Bill never tries a new dish.

The indefinite generic, like the definite, is singular, perhaps even more so than the definite. It appears to refer, not to the type or species, which may loosely describe the referent of the definite generic, but to an individual member of the species alone, and thus such predicates as die out, increase in number, etc. cannot be used with it, as they may with the definite (cf. (15)-(17)):⁴

- (36) *Europeans exterminated a purple wombat.
- (37) ?A purple wombat is rare/common.
- (38) *A purple wombat is gradually dying out/off.
- (39) *After its introduction in the New World, a horse increased...

One of the more interesting properties in which the definite and indefinite generics contrast markedly is their ability to form constructions with the irregular nouns that have only plural forms. Some of these work with definites, although by no means all, but fewer work with the indefinite. (There is also the fact that the restrictions on the use of the indefinite article, in general, are more stringent than those on the definite--certain mass nouns, for example,

can never take an indefinite article, and therefore cannot form an indefinite generic--cf (45) below.) Examples:

- (40) The/a scissors is found in every seamstress's sewing basket.
- (41) The/*a measles can be a serious disease.
- (42) ?The/*a binoculars represents the midpoint between the naked eye and the astronomical telescope. (the is much better with a plural verb, but this does not help the indefinite.)
- (43) *The/*a glasses is/are cursed daily by many women.
- (44) ?The/*a tongs is a necessary tool for handling ice.
- (45) The/*a news is frequently bad.
- (46)?*The/*a {trousers
pants
slacks
tights
hose
male clothing.}
- (47) The/?*a panty should never be seen in public.

There are a number of different points to make here. First, there is a definite tendency, as shown in (47), for the definite generic to de-pluralize the noun; this is acceptable in some cases, but not in all--it is never possible with the indefinite. Note the acceptability of the scissor, the binocular, the plier, the tong, etc., as well as the unacceptability of the corresponding indefinite morphological singulars. Second, much of the plurality seems to be semantically duality; the obligatory plural is mostly applied to duals, whether they be physically separated or not. In a case like panties, where the morphological diminutive reflects a physical diminution to the point where a dual seems not to report the full situation (i.e.,

there is one single piece of clothing with three holes, and no scope for a true dual), the possibility of singularization with the definite is much higher. A similar case is encountered with falsies, where the definite generic is in fact grammatical only with the morphological singular: the falsie, but *the falsies, and *a falsie(s). I hypothesize that the separability is the cause for this phenomenon. In any event, there is a great deal of material here which argues that the distinction between the two types is a real one.

One additional manner in which the definite and indefinite generics differ is that there are some mysterious constraints on the type (and probably the intended force) of sentences they may be used in. Particularly when they are subjects (indefinite generics share the generic-or-stative restriction on the verb that we noted above for definites), indefinite generics seem most natural in definitional sentences, or ones used somehow to identify the nature of the thing specified by the generic by means of properties peculiar to it; they are less acceptable when an accidental quality is predicated of them.⁵ Examples:

- (48)a The madrigal is polyphonic.
 b A madrigal is polyphonic.

- (49)a The madrigal is popular.
 b *A madrigal is popular.

While, as we can see, the definite generic can easily be used in a definition or a property-predicating sentence, as well as in many more, the indefinite seems to be limited to this type.

In fact, the putative meaning of the ungrammatical (49)b seems to be that a thing cannot be a madrigal unless it is popular. It appears that somehow, a suppressed conditional is being implied in these sentences; something on the order of: if something is a madrigal, then it is polyphonic. Some such proposition may be derivable from (48)a as well, but it does not seem to be the main import of the sentence, as it does with (48)b. If we assume that such a conditional is operative (in whatever way) in sentences like (48)b, then we can test the quantifier that seems to be implied: for every x, if x is a madrigal, then x is polyphonic, and by contrapositive, for every x, if x is not polyphonic, then x is not a madrigal. With (49)a, however, something very different is being said: either the type is popular as a type, or we have a generic universal quantifier.⁶ To see this, consider the falsification conditions for (48). Suppose we know of one madrigal which is not polyphonic, and thousands which are. Then, if we consider (48)b, either the one song which is not polyphonic is not a madrigal after all, or (48)b is false--that is, it contains (or at least entails) a true universal quantifier; it cannot be true unless all madrigals are polyphonic. (48)a, on the other hand, seems to contain a generic quantifier, since the situation described does not disturb our sense of the truth of (48)a; the existence of many more polyphonic than non-polyphonic madrigals is what seems to be focused on, and the assertion that madrigals are as a rule polyphonic

is sufficient to let us accept (48)a as true.

The third of the commonly accepted generics is the plural generic, which has the form of an indefinite plural NP. Examples:

- (50) Germans live in Germany, and Russians in Russia.
- (51) Hamburgers aren't very good for you, but you eat them all the time.
- (52) Purple wombats are gregarious.
- (53) Locusts can defoliate a field in 15 minutes.
- (54) Bill likes to drive sports cars when he gets a chance.
- (55) Teamsters drive trucks.
- (56) "Indians" are so-called because Columbus thought he'd reached India.
- (57) Madrigals are polyphonic.
- (58) Bill never tries new dishes because he's afraid someone will try to feed him mayonnaise.
- (59) Men have a tendency to believe that women were created for their pleasure.

As can be seen from even the few sentences above, plural generics share many of the features of both definite and indefinite generics; in particular, they seem to have the generic quantifier associated with the definite generic, since the existence of only one madrigal which is not polyphonic does not make (57) false, as it does (48)b. On the other hand, the plural generic is good in (54) and (55), as is the indefinite generic, but the definite generic is ungrammatical for any of the generics in these sentences (mutatis mutandis) except for the subject of (55). Apparently there are some harsher constraints on the presence

cf definite generics in objects than on either indefinite or plural generics.

In fact, there are a number of things one may say about any of these three generics, since they fall into that perplexing (and altogether too common) linguistic class of phenomena which are parallel, similar, but nonetheless not the same, where every native speaker notes some difference, but is hard-put to explain it. While I doubt seriously that I will be able to solve completely all the mysteries that surround these particular types of noun phrases in this study, there are a number of, I believe, illuminating comments which can be made, and there are some generalizations which can be drawn from them. Probably the best way to get at these generalizations is not to consider these three types⁷ separately, but rather to compare and contrast them in a number of different ways, the better to show their similarities and differences. After a discussion of the syntactic and semantic phenomena in which these generics figure, we will consider various proposals for their analysis.

One phenomenon which we will be encountering again and again in the discussion to follow is the distinction between what I call the 'species reading' and the 'individual reading'. We will find that there are significant differences in the ways in which these various generic noun phrases (all of which have some connection to an individual and to the superordinate class to which that individual belongs--what I call the 'species') can be used in sentences

making reference to that superordinate class as opposed to sentences making reference to the individual of the species. A good example of this shows up when we examine cases with reflexives. Note the difference between the antecedent of itself in (60) (the species rhinoceros) and that of the reflexive in (61) (the individual rhinoceros):

(60) The rhinoceros is killing itself off by overbreeding.

(61) The rhinoceros frequently gets itself stuck in mudholes.

In general, the definite generic can either have a species or an individual reading, with a reflexive; the indefinite generic cannot:

(62) *A rhinoceros is killing itself off by overbreeding.⁸

(63) A rhinoceros frequently gets itself stuck in mudholes.

This is true despite the fact that a rhinoceros refers to the species of rhinoceros just as surely as the rhinoceros does; we will have occasion below to refer to the possibility or impossibility of species or individual readings in various types of sentences.

The first major category of difference we will consider is the use of various generics with tenses. For example:

(64) The buffalo is destroying crops in Uganda.

(65) Buffaloes are " " " "

(66) *A buffalo is " " " "

Similarly, with the perfect,

(67) The bureaucrat has succeeded in making the government totally irresponsible.

(68) Bureaucrats have ...

(69) *A bureaucrat has ...

The ungrammaticality of the indefinite generics in (66) and (69) derives, I believe, from the same principle; namely, that, despite the fact that it is quite difficult in many cases to get a species reference from an indefinite generic, it is nevertheless true that the indefinite generic, when it is the subject of the sentence, must take a predicate which describes something intrinsic to the species. In scholastic Aristotelian terms, the predicate must be a specific difference or a property; an accident will produce anomaly. Therefore, anything which is time-linked, such as the popularity of madrigals, or the actions of various buffalo and bureaucrats, unless it can be read as a necessary concomitant of the definition of madrigals, buffaloes, or bureaucrats, respectively, will produce aberrance in sentences with indefinite generic subjects. Note that the simple present form of (66) is perfectly grammatical:

(70) A buffalo destroys crops in Uganda.

It does, however, have a rather odd interpretation--namely, that destroying crops in Uganda is one of the defining characteristics of the buffalo.

In addition to the blockages of the indefinite generic with the present progressive and perfect, there are some strange usages of generics with the past, and in the passive generally. Normally, a generic NP is not used in the past (at least not with the universal meaning we have been discussing), unless specifically referring to some species

of thing which is not in existence at present--this is possible because the more normal used to construction, which does occur, sometimes invites the inference that the species still exists, and this may be avoided by using the simple past (which still has a generic sense, and in fact has a universal generic quantifier, as we will see). Examples:

(71) *A doctor made house calls.

(72) A doctor used to make house calls.

When specifically referring to the pastness of the event, as in an embedded time clause, however, (71) is good:

(73) Remember the days when a doctor made house calls?

and (72) seems strange:

(74) ?Remember the days when a doctor used to make house calls?

However, since doctors still exist, (72) does not have the ambiguity that (75) has:

(75) Dinosaurs used to eat mammals.

The specific meaning of used to can be read as meaning either False in the present or Not True in the present. The latter meaning does not require the presupposition that dinosaurs exist in the present, but the former does. With (72), it makes no difference whether we presuppose that doctors exist or not, since the presupposition would be true. Since the possibility for ambiguity exists with used to, sentences like (75) can be used in the simple past, without used to, with, however, a generic meaning.

(76) Dinosaurs ate mammals.

This is true for the definite, indefinite, and plural generics.⁹

Another anomaly of the used to construction with generic subjects is related (I think) to their behavior with the passive. In general, the possibility of a generic agent in the by-clause is different (in fact, less) than that of a generic subject in the corresponding active. While indefinites can occur, they do not necessarily have the true universal reading which we have associated with the indefinite generic, and the use of a definite generic as a by-agent seems odd.

(77) Miscreants are arrested by policemen.

(78) Miscreants are arrested by a policeman.

(79) ??Miscreants are arrested by the policeman.

Note, first of all, that the corresponding actives are all grammatical, and normal (in the context that we have been discussing) uses of generics:

(80) Policemen arrest miscreants.

(81) A policeman arrests miscreants.

(82) The policeman arrests miscreants.

But the uses of the plural and indefinite generics in (77) and (78) are not the same as those in (80) and (81)--in the former sentences they seem to be functioning as plain indefinites, rather than referring to all policemen (this may possibly mean that existential quantifiers are present, rather than the more normal universal generic and universal logical quantifiers, respectively), and the definitional sense of (80) (which is **optional**) and (81) (which is **obligatory**) is simply not present in either (77) or (78),

without some twisting of the normal readings of the sentences. Basically, although it is possible, and sometimes desirable for stylistic reasons, to use passives for statements about the agent, rather than the derived subject, as in (83):

- (83) Spiders are eaten by the crested flycatcher,
and insects by the spotted cockatoo.,

without some special stylistic context, sentences like (77)-(79) simply are not taken as having focus on the agent. The use of the word focus here has, I believe, some explanatory value, although this is a word which is dangerous to use, since it can be used too easily as a fudge; while I am not in a position to give a rigorous definition of focus, I believe that in the context of generic NP's (particularly the definite generic), it makes sense to speak of a sentence focusing on one of the constituent NP's, since it is generally true that the definite generic cannot be used felicitously in a sentence which is not mostly concerned with delineating some attribute (or typical activity, which comes down to the same thing) of the species to which the individual referred to by the definite generic must belong. This is (very roughly, and perhaps circularly) what I mean by focus in this context. In terms of the use of generics in passives, this shows up in the lack of universal quantifiers when such generics are used in the by-agent phrase.

Another way of getting at this distinction is to consider paraphrases with true;¹⁰ note that (84) and not (85) is the correct paraphrase of (77), while (85) is the correct paraphrase of (80):

- (84) It is true of miscreants that policemen arrest them.
- (85) It is true of policemen that they arrest miscreants.

Similar paraphrases can be made with all three types of generic NP's, and when used in this way, they show all the restrictions and oddities that are found in the passive sentences:

- (86) It is true of miscreants that a policeman arrests them.
- (87) It is true of a policeman that he arrests miscreants.
- (88) ??It is true of miscreants that the policeman arrests them.
- (89) It is true of the policeman that he arrests miscreants.

Note that the phrase a policeman is generic in (87), but only indefinite in (86), that (88) is strange in the same way as (79), and that the policeman is generic in (89), just as it is in (82). Similarly, we find that the generic in (87) has a logical universal quantifier, while the generics in (85) and (89) have universal generic quantifiers, just as the corresponding active sentences do. "Focus" could conceivably be handled in this context as referring to the subject of some such abstract predicate, but I will not attempt to work out all the details here; the point to make is that there is a distinction, and it is consistent, and it relates to generics.¹¹

I stated above that this peculiarity of generic use in passives is related to another peculiarity of the used to construction with generic subjects; this shows up in

sentences like (90)-(92):

(90) The policeman used to walk a beat.

(91) Policemen used to walk a beat.

(92) A policeman used to walk a beat.

(90)-(92) can have basically similar, if not identical meanings, but there is a possible reading for (92) which does not exist for the others, namely, that it is true of every policeman that he (personally) used to walk a beat, and that therefore this is one of the defining characteristics of the policeman. This is basically a distinction between a species reading, common to all the sentences, and an individual reading (with a logical universal) that only (92) can have. In resorting to the true that construction to paraphrase these sentences, we might make a distinction between a reading with the quantifier of a policeman external to the past of used to, and one with it internal, thus:

(93) It is true of a [=every] policeman that he used to walk a beat.

(94) It used to be true of a policeman [=every one then in existence] that he walk $\left. \begin{matrix} \{ s \} \\ \{ ed \} \end{matrix} \right\}$ a beat.

(The sequence of tenses in (94) is basically irrelevant for our purposes.) In (93), the universal quantifier, since it is external to the tense, is read as meaning all policeman now in existence, while that in (94), commanded by the tense, must be relative to it, and refer to all policeman in existence at the time the statement is asserted to have been true. These sentences cannot be synonymous, and each corresponds to one reading of (92), where the indefinite

generic precedes and (in SS) commands the tense morpheme. This is extremely reminiscent of the Quantifier constraints with (say) negatives, and although I have not checked to see if similar dialects obtain, I would not be surprised to find that speakers of Neg-Q or Neg-V dialects preferred the corresponding interpretation of (92). Note also that similar ambiguities are possible with overt quantifiers:

(95) $\left. \begin{array}{l} \text{Every} \\ \text{Each} \end{array} \right\}$ policeman used to walk a beat.

(96) All policemen used to walk a beat.

The interesting fact about this phenomenon, in addition to the ambiguity of quantifiers and tenses, is that similar ambiguities do not exist for (90) and (91). They readily take a species interpretation, but the individual reading does not involve a logical quantifier, and crossing is not (for some reason) a problem. That is, there appears to be no real difference between (say) (97) and (98):

(97) It is true of the policeman that he used to walk a beat.

(98) It used to be true of the policeman that he walk $\left. \begin{array}{l} \{?s\} \\ \{ed\} \end{array} \right\}$ a beat.

since the policeman refers to a species (or type, in Stewart's terminology), which is not time-bound, by virtue of the fact that it refers to a class by definition, not by enumeration, which is the case with the indefinite generic. Since types and definition of function do not normally refer to times, there can be no difference between a reading with the generic outside the tense, and one with it inside;

since, however, enumeration requires existence of items, and since these must exist at some time, the indefinite generic is time-bound, and quantifies over the items in existence at the time specified by the closest commanding verb (in the unmarked case, the tense of the performative, which is of course present). That is, the policeman, in its species reading, refers to a class defined by functional characteristics--it covers all policemen who have existed, and also all those who perform the function of policemen; a policeman, on the other hand, refers to a class composed only of the people who actually exist (or have existed) and who are called "policemen"--the class is defined by enumerating the members. Note in this regard that it is strange to use the indefinite generic when referring to a fictional situation, even though it might be proper to use it if the situation were actual; the definite and plural generics, however, are perfectly good in these settings:

- (99) {Policemen
 The policeman} come(s) in for a lot of
 abuse in Mickey Spillane's New York.
- (100) ?*A policeman comes in for a lot of abuse
 in Mickey Spillane's New York.
- (101) {Policemen
 The policeman
 A policeman } come(s) in for a lot of abuse
 in New York.

The reason (100) is strange is that there are no actual existing policemen who live or work in "Mickey Spillane's New York", since this is a fictional context; the presupposition on actual existence prevents the class from signifying anything.

Most of the discussion so far has resulted in discovery of distinctions between the indefinite generic, on the one hand, and the definite and plural generics, on the other. A reasonable question to ask is what, if any, distinctions can be made between the uses of the definite and the plural generics. While this topic is not so easy to investigate, since the differences between these two types of generic are not so clear, there do seem to be some interesting situations in which a distinction is made. One of these is provided by noting the distinction between existential and universal generics (in the sense discussed in Chapter I) in sentences containing generic NP's as subjects. It will be recalled that when discussing the verbal generic, we attempted to avoid constructions in which the subject was itself generic, since that would introduce unnecessary complications. At this point, however, having discussed (although by no means solved) many of the problems and enigmas associated with both verbal and nominal generics, we can take a closer look at their interaction. It has already been noted that: (1) the verb must be generic, in some sense, when the subject is generic; (2) many generic readings of particular verbs, or of complements of particular verbs, can be gotten either only or much more easily when the subject is generic; (3) while generic NP's can occur as objects in many cases, there are more restrictions on this occurrence, and the uses are somewhat different, and they do not necessarily involve generic verbs.¹²

Since we are now in a position to discuss at least three different generic NP types, and two basic types of verbal generics, we might consider just what the interactions between these are. There are six possible combinations: existential and universal generics with each of indefinite, definite, and plural generic NP's as subjects. The problem lies in constructing examples which show only what we want them to.

(102) A teamster drinks beer.

(103) The teamster drinks beer.

(104) &Teamsters drink beer.

Referring back to (1.3)

(1.3) &Bill drinks beer.

we note that this instance of the generic predicate drinks beer was marked as ambiguous between an existential and a universal reading. I have marked (104), with the plural generic subject, similarly ambiguous; but (102)-(103), with indefinite and definite generic subjects, are, I believe unambiguously universal--that is, I can understand these sentences only to mean that a teamster (or the teamster) drinks only beer (most likely, of the possible alcoholic beverages available). (104), but not (102)-(103), seems to me to be an appropriate answer to a question concerning the willingness of a teamster to drink beer, along with other things. Similarly, I find that (104) is identical to (105) on one reading, but (102) and (103) express different propositions from those of (106)-(107):

(105) Teamsters will drink beer.

(106) A teamster will drink beer.

(107) The teamster will drink beer.

As we noted in Chapter I, one of the characteristics of the existential habitual generic verb is its virtual synonymy to the use of root will, a synonymy which is not present in the universal. We can also note that the characteristic intonation with which an existential is uttered (which may be characterized as 'concessive') is exceedingly strange with (102)-(103), but not with (104), where it forces an existential reading.

If it is true that existential generics occur only with generic subjects when they are plural, then it should be possible to construct sentences that are normally understood as existential with non-generic subjects, and substitute definite or indefinite generic subjects, making the sentences either ungrammatical or unacceptable in some sense. Note, for example,

(108) Little children bite.

based on the unambiguously existential (3.38)

(3.38) Little Irwin bites.

But when we attempt to substitute definite or indefinite generics for the plural of (108), we find:

(109) ?*The little child bites.

(110) ??A little child bites.

Both of these are anomalous; (109) is strange because of the common propensity to avoid definite generics dealing

with specifically human words--thus, man, but *the man, etc. However, it is quite possible to form a definite generic for child:

- (111) The child at this age is quite active.
 (112) The child needs love and close attention.
 (113) The child will eat whatever you give $\left\{ \begin{array}{l} \text{it} \\ \text{him} \end{array} \right\}$.

In the context in which sentences like these are good, (109) (with or without the adjective) is quite bad. Note also that when a notion like that of (113) is to be expressed, the will must be overt; one can express an existential, but only with will; a plain generic verb will not suffice:

- (114) The child will bite when he is teething.

The corresponding generic verb, (115), has a different meaning:

- (115) The child bites when he is teething.

(115), unlike (114), seems to mean either that the child bites only when he is teething, or that the child always bites when he is teething.¹³ In any event, (115) gets a universal reading, unlike (114), and unlike (108), which is existential, as we might expect.

(110), with the indefinite generic subject, is also a strange sentence, but for different reasons. We might expect that the universal logical quantifier present in the indefinite generic might serve to restrict the generic quantifier on the verb to the universal; this might, I suppose, still be argued to be the case, but it is at least suspicious that overt logical universal quantifiers, as in

(116)-(117), can have existential readings, in addition to universal ones:

(116) &Every teamster drinks beer.

(117) &All teamsters drink beer.

The point to be made here is that, just as the predicate of any sentence with an indefinite generic subject must refer to some sort of innately determined quality, the property of drinking beer, say, in terms of a definition, which is what (102) amounts to, is not understood to be definitive unless it is universal in our sense. In pragmatic terms, the willingness of a person to drink beer is not so characteristic as the unwillingness to drink anything else; as a test to see if a given person is a teamster, (102) directs the tester to see if the person will drink anything but beer, since (102) seems to mean not only that he won't, but that the reason why he won't is that he is, in fact, a teamster--the property proceeds from membership in the class and is therefore suitable for a definition. What is interesting about all this is that the same (or similar) arguments might be advanced to account for the oddness of (11) and the universality of (103), with definite generics. We know, however, that the quantifier in the definite generic is not a logical one, but rather a generic one, and that while the definite generic is suitable for a definition, it does not share the restriction of the indefinite that the predicate be a property or specific difference, proceeding from the nature of the subject. Both of the possible reasons for

restricting the indefinite generic as subject of universal generics fall down when we come to the definite, therefore, and it is questionable whether they should be seriously advanced in this case, since one would like to explain the anomolous nature of these two constructions in the same terms. This consideration, in turn, leads us to the question of whether the reasons for the restriction on the definite and indefinite ought to be explained in the same way for each, or whether it is a coincidence--this, I am afraid, requires a great deal more in the way of analysis than I am in a position to provide here. It seems to me that there is, in fact, some characteristic common to the generics with articles, and that that characteristic (whatever it may be) has a great deal to do with the phenomena of use with universals, but I cannot defend this intuition with proof, or even strong arguments. The best I can do is give some more examples:¹⁴

- (118) The lion eats meat.
- (119) A lion eats meat.
- (120) Lions eat meat.
- (121) Lions eat children.
- (122) ?*The lion eats children.
- (123) ?*A lion eats children.

Finally, among many other puzzling and often astonishing facts that could be mentioned about the verious types of generic (many of which appear in notes to this chapter),¹⁵ I would like to consider the relationship between generic NP's and modals, before turning to considerations of formal

analysis of these constructions. While it has been known for a long time that modal verbs, particularly in their semantics, pose a serious problem for linguists, we do know something about them, and, while much of what we say here may not argue for or against any particular analysis that may be proposed, the facts are so peculiar, and so seemingly intuitively reasonable on the one hand, yet at variance with what we expect on the other, that I feel compelled to discuss them here, since they may shed some light on the analysis of modals, and since they seem to follow (somehow) from the interaction of the peculiar character of modals with that of generics.

First, as noted, the root use of will is allowed with all three types of generics as subject, although it is not synonymous with the plain generic verb except with the plural NP generic, and then only when there is existential reading possible. The epistemic future sense of will has some other restrictions, being common with the definite and plural generics, but somewhat rarer with the indefinite:

(124) Policemen will soon carry $\left\{ \begin{array}{l} \text{walkie-talkies} \\ \text{a walkie-talkie} \end{array} \right\}$.

(125) The policeman will soon carry $\left\{ \begin{array}{l} \text{a walkie-talkie} \\ \text{*walkie-talkies} \end{array} \right\}$.

(126) ??A policeman will soon carry $\left\{ \begin{array}{l} \text{a walkie-talkie} \\ \text{*walkie-talkies} \end{array} \right\}$.

(126), if it means anything, means that the definition of "policeman" is about to change, and all policemen will soon have, among other characteristics, that of carrying a walkie-talkie. Note that when the main verb is itself a

permitted modal, such as can (paraphrased obligatorily as be able to) or must (have to), the sentence loses its peculiarity, and sounds much better.

(127) A policeman will soon be able to call headquarters without stopping to find a phone.

(128) A policeman will soon have to call headquarters every ten minutes on his walkie-talkie.

Similar sentences with definite and plural (mutatis in-explicably mutandis) generics are, of course, perfectly good. I believe the reason for the oddity of the future will with the indefinite stems from the fact that we normally view the characteristic posited of an indefinite generic as being intrinsic, and such characteristics are not liable to change with time; this is, of course, the same explanation that was offered to explain the oddity of (66), (69), and (71).

The modal can, in one of its root senses, that of able, is perfectly good with all three types of generic NP's:

(129) An ant can lift 500 times its own weight.

(130) The ant can lift 500 times its own weight.

(131) Ants can lift 500 times their own weight.

although there are problems with this statement, in that it fails to account for the badness of (132):

(132) *A tiger can still be found in Ceylon.

although the corresponding sentences with definite and plural generics are fine. I suspect that this fact is related to the badness of the plain passive sentence (133):

(133) *A tiger is still found in Ceylon.

where, again, the corresponding sentences with plural or definite are all right. Therefore, the can is not at the root of the trouble, and we can afford to neglect its effect on the sentence for the moment.¹⁶

The other root sense of can, that of allow, is similarly good:

(134) A recruit can go to the EM club, but not the NCO club.

(135) ?The recruit can go to the EM club, but not the NCO club.

(136) Recruits can go to the EM club, but not the NCO club.

although there is something about (135) which seems to mark it as odd, but in a way I find it hard to describe; in any event, the degree of ungrammaticality is small, though it crops up in all of the other examples I have examined:

(137) ?The seeing-eye dog can enter restaurants.

(138) ?The candidate can receive his degree when the thesis is finished.

We will have occasion to refer to this fact again.

In its epistemic sense of possible, can is a negative-polarity item, requiring a negative environment for full grammaticality. However, when the subject is a generic, the restriction is annestied, and can sometimes occurs with an affirmative meaning of be possible:

(139) *That bird can have a vermiform appendix.

(140) The maroon-breasted gnatcatcher can have a vermiform appendix.

(141) *The tree in my yard can have either pointed or smooth leaves.

(142) The live-oak can have either pointed or smooth leaves.

Both (139) and (141) can be grammatical, and in fact the tendency is to read them in the grammatical way; (139) can refer to a species of bird by use of the demonstrative, as shown by

(143) That bird once darkened the skies.¹⁷

(141) is grammatical on a reading where can is taken to be the able root sense; note that on this reading, the tree is understood to have either all smooth or all pointed--on the true epistemic reading of (142), which describes the actual case, the live-oak is often found with both pointed and smooth leaves on the same tree. The stars which I have apportioned refer to the epistemic reading.

The phenomenon of negative polarity is quite complex and poorly understood, but this exception to it seems to point to generics as being related in some way to modals, since certain modal-containing constructions also seem to produce negative-type environments. I have no explanation to offer, but clearly any adequate description of generics must explain this.

We might further explore this exception with regard to its occurrence with all three types of generic NP. It seems that there is some difference. Basically, this epistemic reading is limited to non-volitional predicates; if the verb is volitional, the sentence will be read as containing a root can, of one or another type:

(144) A basketball player can be short. (epist)

(145) A basketball player can dribble. (root=able)

Naturally, when the generic subject does not refer to an animate agent, the sentence itself is limited to non-volitional predicates.¹⁸ It is also important to distinguish species from individual readings; particularly with the definite generic, this is crucial. (142) was grammatical and contained a definite generic as its subject; (146) is ungrammatical:

(146) *The basketball player can be short.

The generic in (142) referred to the live-oak as a type or species, and stated that it is possible for live-oaks as a species to have one or another type of leaf; the generic in (146) refers to an individual basketball player and attempts to state that it is possible that he is short. When a species reading is gotten or gettable, the epistemic can is allowable with the definite generic; when an individual reading is necessary, it produces ungrammaticality with an epistemic can. This is not the case with the indefinite or plural generics, as witness (144) and (147):

(147) Basketball players can be short.

Both of these sentences have individual readings, but note that neither states that it is possible that all basketball players are short. In fact, if we attempt to construct a sentence which could have that meaning, we find anomaly:

(148) ?*Basketball players can be tall.

Apparently, the possible which appears in can is inside the

scope of the quantifier in the generic, and cannot be read as outside it; this is not true in sentences like (142), where a species reading apparently allows either interpretation. To sum up, then, with a species reading, the epistemic can can appear in the affirmative with generics of any kind as subject, provided a species reading is intended; if an individual reading is intended, the can is good only with plural and indefinite generics, but not with the definite.

An interesting case of interpretation arises when we consider the more normal cases of can in an epistemic sense in negative environments. One might look at (149) as being epistemic, but one could also view it as root:

(149) A madrigal can't be a solo piece.

In the root interpretation, the meaning seems to be "if it's a solo piece, you aren't allowed to call it a madrigal"; i.e., it is the definition of the word that is at issue. Similarly,

(150) A sonnet can't have 13 lines.

Naturally, the precise meaning of the root modal, and the identity of the person who is not allowed to do something, will depend on the context; if one has been assigned to write a sonnet, and brings in a poem of 13 lines, the teacher might say (150), meaning, "you aren't allowed to write a sonnet with 13 lines". Alternatively, if a student saw a poem with 13 lines and called it a sonnet, the teacher might correct him with (150), meaning that he could not apply the name sonnet to such a poem. The former meaning

can also apply to (149), but it does not spring so easily to mind because madrigals are not often written these days, and any that one sees are apt to be several centuries old-- therefore the proper term of reference is more likely to be the topic of the prohibition.

Lakoff(1972) has investigated some interesting sentences bearing on the relation of modals and nominal generics; of particular interest is her sentence (1)(b):

(151) Football players can be sex maniacs.

She notes that this is triply ambiguous, having any one of the following meanings: (her (2)(a)-(c))

- (152)a Any given football player sometimes is, and sometimes isn't, a sex maniac.
- b Some football players are (always) sex maniacs, and some football players aren't.
- c Some football players are (sometimes) sex maniacs (sometimes not); and some football players are not (ever).

These three readings correspond to various sequences (and choices) of quantifiers binding football players and occasions; there appears to be a restriction that, with the epistemic can, one, at least, of the quantifiers must be existential, and that they must appear in the order individuals-occasions. (I reproduce below her logical descriptions of the readings--her (6)-(8))

- (153)a $(\forall x) (\exists t) (SM(x,t))$ (= (152)a)
- b $(\exists x) (\forall t) (SM(x,t))$ (= (152)b)
- c $(\exists x) (\exists t) (SM(x,t))$ (= (152)c)

It is interesting to investigate this sentence with the other types of generics; we have noted that the plural

generic is by far the most free and is likely to occur in more types of constructions (and with more ambiguity) than the articulated generics. Thus,

(154) The football player can be a sex maniac.

(155) A football player can be a sex maniac.

The first thing to note about these sentences is the sentence with the definite generic, (154), does not have the possibility of treating the predicate be a sex maniac as an active verb, as (153)a and c do; this is, there must be a universal quantifier over times involved here, if indeed we need to say that any quantifier is present at all, since this appears to be a normal use of a stative predicate. There is a reading of (154) which treats the predicate as active, but on closer examination, we find that the can occurring here is actually the root able; this is exemplified by (156):

(156) The football player can be a (real) sex maniac(when the occasion requires).

Since being a sex maniac is not normally either expected or surprising on the part of a football player (as shortness or tallness is of a basketball player), we have no reason to rule out the universal reading on the species, so that there turn out to be two readings for (154): one corresponding to (153)b, with an individual reading, and one like (153)d, with a species reading:

(153)d $(\forall x) (\forall t) (SM(x,t))$

(note that the order of quantifiers is irrelevant in (153) c and d, since both quantifiers are of the same type). I

have difficulty conceiving of a reading corresponding to (153)b with reversed quantifiers--something like "at every moment some football player is being a sex maniac", which is strange, to say the least. However, there is some sense to the reverse of (153)a, which would be on the order of "there are some occasions when all football players are sex maniacs". While this might seem to be a candidate for a reading for (154), I find that this is unacceptable for me-- (154) can simply not mean that, unless we get into the root sense of the verb.

Finally, the sentence with the indefinite generic, (155), seems to be more akin to the sentence with may mentioned by Lakoff; in order to assert (154), for example, one would have to be committed to the assertion that there are or have been some football players who were or are sex maniacs; similarly (as Lakoff points out) for (151). But the evidence necessary to disprove (151) or (154), namely the evidence that there is not and never has been a football player who acted at any time like a sex maniac, seems to me to be still insufficient to disprove the assertion of (155), which is to the effect that it is possible (i.e., occurs in some possible world) that some given football player behaves like a sex maniac (either all the time or sometimes). This, in essence, is the reading which she describes for the corresponding sentence with may--the modality of the possible overtly quantifies over possible worlds in this case, instead of over individuals and real events only. I find this fact quite puzzling, but I think

the data are reasonably clear; when one uses the indefinite generic in (155), one is referring to possibilities deriving from the nature of the definition of football player, and since it is possible for any human to be a sex maniac, and since football players are human, it is therefore (theoretically) possible for them to act that way. I believe that this fact should be a consequence of the special nature of the indefinite generic and of the restrictions placed on the predications one can make of it; but I have no explanations to offer here.

The root sense of may is basically identical to that of can (=allowed), but there is one small difference in its use with generic subjects: the slight ungrammaticality that exists with this root sense of can with a definite generic subject is not present with the root sense of may.

- (157) The recruit may to to the EM club, but
not the NCO club.

Compare (157)-(159) with (135), (137), and (138):

- (158) The seeing-eye dog may enter restaraunts.
(159) The candidate may receive his degree when
the thesis is finished.

Similarly, the other generics all work nicely with this root sense:

- (160) Students may take an exam or write a paper.
(161) The student may take an exam or write a paper.
(162) A student may take an exam or write a paper.

In keeping with what we know of the root nature of the modals, note that none of (160)-(162) can mean that what is allowed

is that either all of the students write a paper or all take an exam; similarly, neither of the acceptable sentences with can have this meaning:

(163) A student can take an exam or write a paper.

(164) Students can take an exam or write a paper.

Again, as we noted with the sentences with can, the quantifier is outside the scope of the modal.

With the epistemic may, we find the following paradigm:

(165) The snowy egret may fly as much as two thousand miles to reach his nesting place.

(166) A snowy egret may fly as much as 2000 miles to reach his nesting place.

(167) Snowy egrets may fly as much as 2000 miles to reach their nesting place.

All of these are good, but the use of may, while clearly epistemic, seems somehow different from that of (168)

(Lakoff's (1972) (1)(a)):

(168) Football players may be sex maniacs.

This sentence clearly quantifies over possible worlds, and is not falsified if evidence is discovered that no football player has ever behaved like a sex maniac--after all, it's still possible. (165)-(167), on the other hand, seem to me to be statements of what has happened in the past, rather than what is true in possible worlds, and are clearly false if, for example, it is shown that no snowy egret has ever flown more than a thousand miles to reach his nesting place. I think we are dealing with a different modal entirely here, one actually more like epistemic can than like may. In order to get the range of interactions, we must

consider sentences like the following:

(169) The professor may get less money next year.

(170) A professor may get less money next year.

(171) Professors may get less money next year.

While all of these are good, there seems to be some difference between these and some of the previous sentences, in that in (169)-(171), the scope of the modal includes the quantifier, whereas in most of the previous sentences, the quantifier was outside the scope of the modal. To test this, let us construct a sentence which is similar to (160)-(164):

(172) Professors may either get less money or have to work more next year.

This seems to mean that it is possible that either all professors will get less money next year, or that all professors will have to work more next year. In contrast, the root may in (173)

(173) Professors may either take less money or work more next year.

means that any professor may either take less or work more--the choice is individual, not group. Again, I have no explanation for this fact, but it underlines the contention made by Lakoff that there are significant and unrecognized differences between apparently similar modals, such as epistemic may and can.

The next modal I would like to consider here is must. In its root sense, it has the sense of strongly obliged. For examples of must with generic subjects:

(174) Policemen must wear their uniforms on duty.

(175) The policeman must wear his uniform on duty.

(176) A policeman must wear his uniform on duty.

All of these work nicely, and no undue complications ensue; however, when the nature of the NP is such as to disallow a reading on which the subject is the person on whom the obligation lies (as, for example, with a non-animate), then an interesting possibility arises:

(177) A madrigal must be polyphonic.

(178) ?*The madrigal must be polyphonic.

(179) Madrigals must be polyphonic.

(177)-(179) seems to mean that in order to be called a madrigal, a thing (presumably a song) must be polyphonic--the obligation is therefore on the composer and/or namer. Interestingly, (178), with the definite generic, is odd; I believe this is because the only allowable reading for this is an individual one, and a species reading is the only one which makes sense here. Therefore, for (178) to make sense, one would have to be stating an obligation on (literally) the writer or the namer of the madrigal, which is, of course, rather silly, since such a concept must include all writers and/or namers of all madrigals, past and present, and to state that there is an obligation on such a group is absurd. Why the species reading is required here is, however, beyond my power to explain. That the definite generic is not per se ungrammatical with root must as a non-animate subject, however, is shown by:

(180) The dining room must have many electrical outlets.

Note, however, that (180) refers not to a restriction on the definition of dining room, but to a necessity for its construction. We must distinguish, therefore, between those obligations which have to do with the proper names of things, and those which have to do with their proper nature. Obviously, either can be referred to with generics.

The other modals, epistemic must and root and epistemic should, present no particularly embarrassing enigmas; the only thing to note is that there is some small difficulty with the semantics of certain of the epistemic should constructions. In these cases, it is strange to refer to something so well-defined as to be a generic (particularly a definite or indefinite generic) with epistemic should, since this would mean that a certain characteristic seems likely to be true of the subject, although we don't know enough about it to say for sure. Examples:

(181) ?The mammoth should have had large tusks.

(182) ?A mammoth should have had large tusks.

(183) ?Mammoths should have had large tusks.

The oddness of this series of sentences stems from the fact that we know that some mammoths, at least, had large tusks, and, although the corresponding sentences with epistemic must are all right (for example,

(184) The mammoth must have had large tusks.

(185) A mammoth must have had large tusks.

(186) Mammoths must have had large tusks.),

this is due to the differences in confirming evidence required by the two modals. In (181)-(183), we seem to be

saying that we are concluding from a study of characteristics of the mammoth other than tusk size that they had large tusks, while in (184)-(186), we are generalizing from some few tusks to the whole of the species, which is, of course, what was historically done. (181)-(183) are strange because this is not the way we know things were (and are being) done.¹⁹ It is possible to construct sentences with generic subjects with epistemic should that are good:

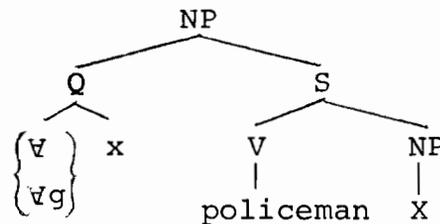
- (187)a A plumber should have a high annual income.
 b A plumber must have a high annual income.
- (188)a The plumber should have a high annual income.
 b The plumber must have a high annual income.
- (189)a Plumbers should have a high annual income.
 b Plumbers must have a high annual income.

While there is the usual difference between the usage of must and should in their epistemic senses here (see Lakoff (1972) for some further discussion of this problem), there is no difficulty of any of the sentences being unacceptable. This is because the acquisition of a high annual income is not a defining characteristic of plumbers (although this may soon change--(187)a and (188)a (although not, for some reason, (189)a) seem strange with banker substituted for plumber), and the epistemic should is only strange when used with a predicate that is somehow innately connected with the nature of the subject generic; accidental characteristics may be either deduced or induced, but essential ones may not be deduced, since they are well-known--they may, however, be extended by induction to the whole species, trivially, and this is the purpose of must in this connection.

Among the plethora of facts, pseudo-facts, and mysteries we have elicited regarding generic NP's, one fact stands out: quantifiers are somehow associated with such NP's, and any adequate treatment of them must go into the nature and function that these quantifiers have. While I do not pretend that I have any such adequate analysis to offer, there are some possibilities which can be explored.

All the evidence, for example, points to a logical quantifier's being associated with the indefinite generic, while the definite and plural generics use generic quantifiers, similar (if not identical) to the ones discussed in Chapters I and II. The major question is, how are such insights to be represented in underlying structures for the various types? One proposal might be to treat the nouns involved as contentives, and therefore predicates, giving a basic structure akin to (190):

(190)



Such a proposal would have the advantage of showing how the quantifier binds the variable involved, and giving the required NP output when the quantifier is (somehow) deleted. The two possible quantifiers would have the advantage of allowing us to distinguish between the indefinite (with the logical) and the definite and plural (with the generic).

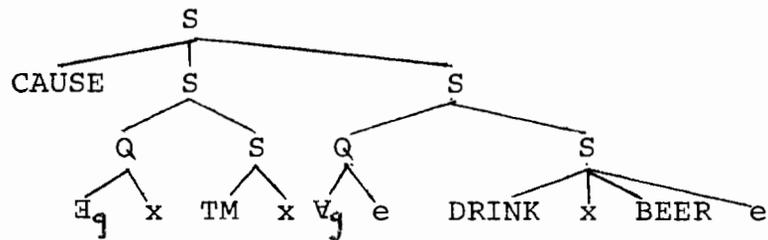
However, there are a number of difficulties with this analysis. First, how are we to distinguish between the plural and the definite, which both have a generic universal? Nothing in (190) allows us to do so. Second, nothing in (190) tells us anything about the restrictions on the indefinite regarding the essential nature of the predications made of it, and since this plays such a central role in its semantics and syntax, it is hard to believe that such a specification should not be made explicit in the structure of the indefinite generic. Third, how are we to distinguish between the species and the individual readings of the various generics? (190) could conceivably be read either way. Fourth, nothing in (190) prepares us to analyze any interactions of generics with the verbs used with them; there is no reason why, for example, the verbs used with generic subjects must be either generic or stative, nor any reason why some generics can take existential generic verbs, and others not, nor why the strange restrictions on the modals function the way they do. In short, almost everything we have discovered about generics would be disposed of as an accident if we were to adopt this approach. For this reason, I am loath to accept (190) as more than a first approximation to a solution.

On the other hand, any solution which puts in enough logical structure to satisfy the objections above will be terrifically complicated, and syntactically indefensible-- I know of no principled rules which will even give us reason-

able surface structures from the (relatively simple) structures posited in (190) and in Chapter I.

Still, it may be possible to characterize some of the relationships that obtain between the NP generics and other parts of the sentence. To begin with, it is apparent that the relevant parts of the predication of the indefinite generic stand in a unique relationship to the head. I hypothesize that the clause containing the predication of the contentive is in some sort of causal relationship to the rest of the sentence. That is, (102) derives ultimately from a causal statement, something to the effect that the fact that there exist teamsters causes²⁰ it to be the case that any of them drinks beer. This is an ultimate appeal to the meaning of the word "teamster", as we noted in numerous other cases, and a claim that the generic property of drinking beer (in its universal sense, note) is intrinsically necessary to the correct definition of a teamster, or else proceeds from other parts of the definition by simple deduction. An analysis like this has some advantages over that of (190): first, it allows us to properly characterize the peculiar quality of the indefinite generic--that it can only be used of predications which are necessary in some sense. Second, it gives us a syntactic/semantic reason for the strong presupposition of existence which we have found to be the case with the indefinite generic, namely the fact that subject complements of CAUSE and similar predicates are presupposed. A very rough approximation to such an analysis is given in (191):

(191)



Obviously, there is much wrong with this structure;²¹ I will not attempt to defend it in detail, but I think there are some things about it which commend it, or something like it, to anyone seriously interested in analyzing the semantic structures of generics.

In dealing with the plural and definite generics, it is necessary to take Stewart's (1972) analysis into consideration. While I disagree with a number of things in his analysis, it is still true that there is much of value there, particularly when it comes to his analysis of NP generics. Unfortunately, he does not recognize any necessity of relating logical forms to surface forms, so there is, for example, no discussion given in his thesis of the definite, indefinite, or plural generics as such, nor is there even any appearance in the example sentences of an indefinite generic. In discussing his work, then, I am put into the untenable position of attempting to extend his (essentially semantic and logical) analysis along syntactic lines, and expanding it to take into account some of the facts and forms which are not treated there.

Stewart makes note of what he calls "categorical", "collective", and "distributive" generics. These categories,

however, do not correspond to the three types of generics we have discussed in this chapter--the "categorical" and "distributive" generics are both plurals, while his examples of the "collective" include both definites and plurals. (192) illustrates a collective, (193) a distributive, and (194) a categorical:

(192) Dinosaurs are extinct.

(193) Graduate students are poor.

(194) Atoms are decomposable.

Stewart notes correctly that (194) and similar categoricals are true of all atoms without exception, since they state a necessary property, while (193) and similar distributives are true "in general", but not falsified by a single counterexample; finally, (192) and similar collectives state predications which apply to all the members of a class as a class, and are not applicable to single members.

I do not propose to discuss here Stewart's logical resolution of the data, since it deals with the application of his system of logic, which is quite complex, and different from that which we have been using (informally) in this study. I do think, however, that it is important to be able to account somehow for the observations he makes as to the distinctly different meanings of the (in this case, plural) generics. To begin with, the categorical generic, as exemplified by (194) seems to be nothing more than a plural of the indefinite generic, rather than a separate plural generic such as we have been discussing here; all

the evidence points to the categorical generic's having the same restrictions and peculiar semantics as the (singular) indefinite. The fact that indefinite generics can pluralize should be a surprise to no one, since the plural of the indefinite article is zero, and since it appears that the plural generic may well be a plural of the definite, since it shares some of the characteristics with it. In regard to the categorical generic, then, whatever analysis we find adequate for the indefinite generic should do for it as well, with the addition of a pluralizing element, which very likely need not be in the logical structure, since the meaning of the indefinite as we have been discussing it is equivalent to a universal plural; that is, (194) is equivalent to (195):

(195) An atom is decomposable.

The other two classes share many of the characteristics we have noted about plural (and definite) generics before, and, in fact, I believe that the collective and distributive generics correspond to what we have been calling the species and individual readings of the generics.²² Note that the collective generic is only possible unambiguously when the predicate being used is one which cannot be used of an individual item. I believe that, while Stewart is correct in distinguishing these senses, and may even be correct in his analysis of them, there is no reason to suppose that they constitute (as he does, apparently) the only (or even the major) classes of generics; they can, I think, be handled

as well (or as poorly) in the framework of generics that we are using here. Clearly, we must distinguish between species and individual readings, but we must do so in a way that captures the generalizations relating the other types of generics, and their surface realizations.

One observation of Stewart's is worth repeating and expanding upon. In what turns out to be the only part of his discussion that refers to a particular surface form of a generic, he proposes the notion of the "type" to account for the peculiarities that we have seen manifested in the definite generic (although it is true that many of the generics with the, as Stewart notes, are not of this type). He conceives of the type as being the standard or ideal against which individual instances are judged; something like this must exist conceptually for a phrase such as "a typical boy " to have any meaning. As Stewart notes, an analysis of this phrase which derives the adjective from an underlying relative clause containing the predicate "typical" is nonsense: "a boy is typical" makes no sense. This is, of course, because typical is a symmetric predicate, in the sense of Lakoff and Peters (1969), and therefore cannot be predicated of a single individual. This does not, however, explain why a typical boy is grammatical. Stewart proposes that there is a logical notion of a type which gives us some standard of comparison on which to base a statement; he defines it as possessing all the characteristics of (in this case) boy except for individuation. He further suggests

that the definite generic is, at least in some cases, the surface realization of the type. I think there is a lot of merit in this analysis, and something of the sort is surely needed to enable us to characterize the definite generic. The big question is, as usual, how to go about setting this up as a reasonable semantic structure. I must confess that I have no concrete suggestions to offer here, and Stewart's logical description, dealing as it does with a number of concepts of (I believe) doubtful utility in semantic and syntactic descriptions, is no help, either.

In conclusion, although there has been a good deal of discussion of the different kinds of generics, and although we have discovered a number of facts about the distinctions, I do not think we are much farther along in our analysis of them, except in that we seem to have found rather overwhelming proof that quantifiers are present in the logical structure (whatever that is) of all the generics. In this the NP generics are similar to the verbal generics; but in many other ways, there seems to be no easily expressible generalization which relates the two.

FOOTNOTES

⁰This chapter is one of the most unsatisfactory (to me) things I have ever written or read. I am afraid that I have failed totally to capture the generalizations which I feel are lurking somewhere, ready to explain the whole phenomenon of generic NP's and their relationship to verbal generics. In addition, while much of what I discuss here is my own, I owe more than I can say to Robin Lakoff, whose earlier work on (particularly) NP generics gave me a plethora of examples and counterexamples to draw upon. I have, in fact, drawn upon them in extenso, to such a degree that just about every other sentence which illustrates a particularly interesting point can be traced back to her. I have not attempted to single out the examples which are to be attributed to her, except for those which have seen print; let it stand that she could have done a much better job on this, and that any virtues it possesses are due to her as much as to me; the faults, however, I lay claim to.

¹See below, p.149 ff., for discussion of Stewart's analysis of NP generics.

²As noted below ((15)-(17)), there are many sentences for which this claim is simply untrue. This is, I believe, because there are two possible readings of the definite generic; a species reading and an individual reading. We discuss this at more length below.

³Although not discussed at any length in this study.

⁴This does appear to be true, since there is a definite presupposition of singular identity connected with the indefinite generic which restricts the species reading.

⁵There is also a strong tendency to use the indefinite with a modal of certain types: note that the (more or less randomly generated) sentences (26)-(35) contain several modals, and that many of the sentences which are normally used to illustrate the indefinite contain modals:

(196) An ant can lift 20 times its own weight.

etc. While the interaction of modals and generics is discussed below at some length, there is nothing there to

indicate why there is this tendency to use modals with the indefinite.

⁶See Chapters I and II for discussion of the nature and use of these quantifiers.

⁷In saying "three" I am again excluding a number of interesting phenomena from discussion. There are, for example, quite different types of generics found in sentences like:

- (197) Now, your opera singer is usually fat.
 (198) This tire is manufactured by the millions.
 (199) The looting of cities is best conducted rapidly.
 (200) The poor are always with us.
 (201) Man is mortal.

Of these, some can be eliminated as being alternants of the types discussed; for example, (201) contains man, which might seem to be a representative of a putative "zero" class; but in fact it can be shown that this is not the case. man is simply the definite generic form for the morpheme man; there is a constraint against using the definite article to form the generic with man and (to a lesser degree) woman. The definite in (200) is also probably a variant of the definite generic, although it is an interesting problem why it is possible to do this with the definite and not the indefinite or plural. One might hypothesize that the demonstrative in (198) is another form of the definite, but I have no evidence to offer that this is so. The definite article in (199) is not necessary; that this is generic is due to its being the nominalization of a verbal generic-- I have not investigated this phenomenon as thoroughly as it deserves to be. Finally, I have nothing at all to say about the "second-person" generic in (197)--while it is extraordinarily common, I have seen no reference to it in the literature, and have not attempted to investigate it, either. There are, no doubt, other types of generic NP's, but I am not going to discuss them either.

⁸There are, however, some interesting co-reference relations with indefinite generics: note, for instance, that the following sentence is perfectly grammatical, even though the antecedent of the plural pronoun is singular (syntactically):

- (202) A buffalo will be harder to find in 50 years, since $\left. \begin{array}{l} \text{they} \\ *it \\ *one \end{array} \right\}$ will be extinct.

This sentence sounds so normal, in fact, that one is tempted

to dismiss it as a perfectly usual process of substituting a plural when one knows that more than one exist, regardless of genericity; however, that it is indeed a property of genericity is shown by the astericity of (203):

- (203) *A buffalo that died in the zoo yesterday is going to be put into the museum, since they're almost extinct.

Note also that such a relationship is not possible with a definite generic (although for obvious reasons it works with the plural):

- (204) The buffalo will be even harder to find in 50 years, since $\left\{ \begin{array}{l} *they \\ it \\ *one \end{array} \right\}$ will be extinct.

Note that the first clause of (204) has an individual reading, while the second clause (with the grammatical it) has a species reading. Apparently such things are possible, even with a presupposition of coreference as strong as that of pronominalization. I have no explanation for this, needless to say. Finally, note:

- (205) Buffalo(es) will be harder than ever to find in 50 years, since $\left\{ \begin{array}{l} they \\ *it \\ *one \end{array} \right\}$ will be extinct.

This sharing of the reference with a plural subject in cases like the above is just about the only phenomenon known to me in which the plural and indefinite agree in possessing a characteristic not shared by the definite. I think, however, that this is an accident, since the indefinite can also be referred to by a singular, and normally is, when not used as the subject of some predicate like extinct (which is, as noted, out for the noun generic), while the plural must always pronominalize a plural.

⁹This is not strictly true as stated. Actually, the part of the meaning which refers to the present is an invited inference, not a presupposition or an entailment. What should be said about this is that the inference, which is normally intended to be made in the case of (75), may be read in two ways, and therefore the possibility of ambiguity in positing the present existence of dinosaurs allows the use of the simple past, which does not have any invited inference.

¹⁰I am indebted to Mike Stewart for bringing this paraphrase and its possibilities to my attention in a forceful manner.

¹¹Note that the correct paraphrase of (83), which we noted had focus on the agent phrases, is (206), not (207):

(206) It is true of the crested flycatcher that it eats spiders, and of the spotted cockatoo that it eats insects.

(207) It is true of spiders that the crested flycatcher eats them, and of insects that the spotted cockatoo eats them.

¹²In fact, I have very little to say about the occurrence of various generics as objects; the phenomenon mystifies me. It seems that the "proper" place for a generic NP (particularly an indefinite) is the subject slot. There are undoubtedly more generalizations lying about waiting to be discovered here, but I have not tripped over any lately.

¹³Or both. See Appendix for a discussion of the meanings of only and always in the context of generic universal quantifiers.

¹⁴I am grateful to R. Lakoff for these examples, as well as the fundamental description which has allowed me to ignore the other "zero" generics which I referred to in note 7. These are exemplified in:

(208) The Tutsi eat { gazelle
buffalo
hippopotamus }.

While the first two animals named in (208) might be thought to be plural, sharing the common zero allomorph of the plural, but it can easily be seen that this is not true, since the plural of hippopotamus is not formed (even optionally) with that allomorph. What is going on here is that the zero possibility for the definite generic is triggered by the use of the noun in a context of either eating or hunting, primarily in the object position. That is, the following sentences are good:

(209) Buffalo { is
are } seldom hunted by Indians anymore.

(210) Hunters enjoy pheasant.

(211) The lion will stalk buffalo, but it prefers antelope.

while the following are not, for various reasons:

(212) *Lion are seldom hunted by white hunters anymore.

(213) *Hunters enjoy { the } pheasant. (in intended reading)

- (214) *Lion will stalk buffalo, but it prefers antelope.

In (209), buffalo can be read either as a plural with the zero allomorph, thus making the plural verb grammatical, or as a definite generic, thus making the singular good. Since lion in (212) cannot form the plural with the zero, the plural verb is ungrammatical. In (210), pheasant means pheasant meat, a meaning which the generics (or non-generic, in the case of the indefinite) in (213) cannot take; thus, while there are grammatical readings of (213), it is not the same as (210). Finally, (214) shows that the zero allomorph of the generic cannot occur in the subject unless it is derived from an object of a verb conveying the sense of hunting or eating, or otherwise gets this meaning across. It cannot occur, in fact, in any context, even one conveying these meanings, if it is clear that the NP generic with the zero allomorph isn't the thing being hunted or eaten; note that (215) is out, for similar reasons:

- (215) *Buffalo $\left\{ \begin{array}{l} \text{is} \\ \text{are} \end{array} \right\}$ frequently eaten by lion.

In this sentence, it is not the subject, buffalo, which causes the ungrammaticality--it is the agent, lion.

While there are many hypotheses which could account for this strange state of affairs, (e.g., beheadings (see Borkin (1972a) for a discussion), verb embeddings, conversational postulates or other transderivational phenomena) the fact remains that, whatever the explanation, the description of the phenomenon shows that it is safe to ignore it if we stay out of the particular context of venery.

¹⁵ For example, the fact noted by, among others, Chafe (1970) to the effect that the definite generic, for some reason, tends to be more acceptable when used to refer to an item which is not common in the context of the utterance. (216) is perfectly all right, while (217) is strange:

- (216) The hookah is smoked in the Near East.
 (217) ??The pipe is smoked in Cambridge.

Similarly,

- (218) ?*The chair can be dangerous.
 (219) The chair was used for ceremonial purposes as early as the 10th century BC.

There is a clear difference in acceptability between the uses of the definite generics in (218) and (219) (due to R. Lakoff) which I am totally unable to explain, or even describe in any general terms.

¹⁶Although an alternative explanation might note the fact that the subject of the root can in (132) is not the same as the NP that shows up as subject on the surface-- that is, the ability does not rest with the tiger, but with the indefinite (anyone or some such) agent which has been deleted. There may well be some constraints against forming this type of construction (common enough in other contexts) with an indefinite generic as derived subject. This is, of course, only a possibility, and in fact, does not explain why such a state of affairs should obtain.

¹⁷cf. note 7.

¹⁸This is actually too simple. There is a good deal more "anthropomorphizing" present even in everyday language than linguists have been willing to admit. The fact that there is any good reading for (141) gives the lie to the statement about being limited to non-volitional predicates, but it is a convenient fiction, and does not seem to vitiate the arguments presented here, so we will (for the moment) ignore this phenomenon.

¹⁹This case underlines yet again the need for taking into consideration facts about the world which are known to the speaker and hearer in order to describe and explain language phenomena.

²⁰There is something wrong with the use of the predicate CAUSE in this context. What I mean to imply by this use is that there is something about the nature of the subject indefinite generic which makes it necessary that the predication is true. Whether this means "cause" or something else is open to serious question.

²¹For example, there is the question of just how the putative quantifiers in (191) interact, and in fact whether they are in this relationship to each other. Furthermore, I have no idea, even if this turns out to be a correct analysis, whether either or both of the quantifiers are generic or logical. There seem to me to be equally good (or bad) reasons for postulating either type. (191) should be taken in the spirit it is intended to point out one aspect of a proposed analysis, without necessarily having anything to say of consequence about the rest of the structure.

²²This statement, while true, I believe, should not be taken as a claim that this somehow explains either Stewart's observations or mine. I have in fact no idea just how the difference between species and individual readings should be analyzed in the (mythical) adequate analysis of generics, a fact which the alert reader will have gathered by now.