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Genericity and Indefinite NP's

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Indefinite noun phrases are noun phrases such as a book, some students, and professors. Some indefinite NP's denote a class of objects or individuals as in (1) and (2).

- 1) In general, a language teacher works hard
- 2) Cats sleep during the day

The subjects of sentences (1) and (2) exemplify generic readings of an indefinite singular NP and a bare plural, respectively.

Indefinite NP's also have existential readings.

- 3) A woman walked into the room.

A woman in (3) may or may not refer to any particular woman.<sup>1</sup> Among indefinite NP's, I will consider the bare plural and NP's containing the indefinite article a, and among the readings, I will be concerned primarily with the generic readings.

Although indefinite NP's appear to be ambiguous between existential and generic readings, there are several recent analyses of indefinite NP's that suggest that they may not be semantically ambiguous. In treating bare plural NP's, Carlson (1982, 1977) argues that they are unambiguously interpreted as kind denoting terms. Existential readings of bare plurals arise from the meaning of the verb phrase they are arguments of. On Carlson's account, in the sentences in (4) the bare plural is interpreted as the name of kind.

- (4) a. Dogs are widespread  
 b. Dogs are running around the building

In (4a) are widespread is a predicate that applies only to kinds, so it applies directly to a kind-denoting subject to get the meaning, roughly, "Dogs, as a kind, are widespread." Sentence (4b) contains a predicate that applies only to stages of individuals. Carlson suggests that the meaning of a stage-level verb phrase when applied to a kind-denoting subject contributes the existential quantification over stages, so (4b) means roughly "there are some instances of the kind *d* running around the building," where *d* is the dog-kind. With this analysis of stage-level predicates, he is able to maintain that bare plurals are unambiguous.

To account for the behavior of singular indefinite NP's, Heim (1982) and Kamp (1981) argue that singular indefinite NP's are uniformly treated as variables. Indefinite NP's do not contain an existential quantifier in their translation, although if they are not in the scope of any quantifier or in the antecedent of a conditional they receive the quantificational force of an existential. This follows on both theories since any free variables act as if they were bound by an existential quantifier as a result of Kamp's "embedding conditions" for discourse representation structures (DRS's) and Heim's satisfaction conditions for semantic files.

Both Carlson's analysis of bare plurals and the Heim/Kamp theory of indefinite singular NP's can be extended to handle NP's like a teacher that have a generic reading. All three authors make suggestions for how this can be done, but their suggestions are not all compatible. I will argue contra Carlson that bare plurals are semantically ambiguous, but indefinite singular NP's are not. Bare plurals can be either kind denoting terms as argued by Carlson or variables as

suggested by the Heim/Kamp approach. Singular indefinite NP's are only treated as variables. Apparent ambiguities of indefinite singular NP's are due to the nature of the operator that binds the indefinite.

The paper is organized as follows. In the first section, I will discuss the Heim/Kamp approach to indefinite NP's and show that the treatment of indefinite singular NP's can be extended to those NP's that have a generic reading. In section 2, I discuss some of Carlson's objections to positing an ambiguity of the bare plural and how the data he presents can be handled in the Heim/Kamp framework. Section 3 addresses some differences between bare plurals and indefinite singular NP's, including co-occurrence restrictions with various predicates and scope phenomena. In section 4, I present two problems raised by the proposed analysis.

#### 1. Extending the Heim/Kamp approach

Recent work on indefinite NP's and anaphora by Heim and Kamp relies on a treatment of quantified NP's based on the work of Lewis (1975). Lewis treats adverbs such as always, sometimes, and usually as unselective quantifiers, that is, quantifiers that can bind any free variables in their scope. In sentence (1), the adverb of quantification is an unselective quantifier, and the if-clause serves to restrict admissible cases.

- 1) Always, if a man owns a donkey, he beats it now  
and then (Lewis, 1975)

If (or if-then) is no longer the two place operator of standard logic. The truth conditions for (1) are, "(1) is true if and only if for every assignment to  $x$  and  $y$ , where  $x$  is a man,  $y$  is a donkey, and  $x$  owns  $y$ ,  $x$  beats  $y$  now and then."

Heim and Kamp extend Lewis' analysis to the universal quantifier. Sentence (2) is represented in Heim's theory by a structure similar to (3).

- 2) Every student walks  
3) Every<sub>x</sub> student ( $x$ ), walk ( $x$ )

the variable, forms the restrictive clause in the logical form. The truth conditions are as expected, "(3) is true if and only if for every assignment to x, where x is a student, x walks."

Thus, determining what the restrictive clause contains for a determiner such as every is easy: it is all and only the material of the first NP that contains the determiner. However, determining what the restrictive clause of an adverb of quantification contains (or a vague quantifier<sup>2</sup>) depends on a number of factors, among them, focus (for a detailed account of focus and adverbs of quantification see Rooth (1985)). Sentences (4) and (5), which were brought to my attention by Partee, differ in meaning, where the underlining indicates focus.

- 4) John always walks to work
- 5) John always walks to work

(4) is equivalent to "Always, if John goes to work, he walks," while (5) is equivalent to "Always, if John walks somewhere, he walks to work."

Adverbs such as normally and typically have similar properties. Sentence (6) (Angelika Kratzer, pc) is equivalent to the paraphrase in (7).

- 6) Normally, Mary writes good books
- 7) Normally, if Mary writes books, they are good ones

I represent (6) as:

- 8) Normally, write (m,x) & book (x), good-book (x)<sup>3</sup>

The restrictive clause contains material from the predicate. I will return to tripartite structures of this kind below.

To extend the Heim/Kamp approach to sentences containing NP's with generic readings, I suggest that there is a G operator that is similar to the adverb generally or typically. (A similar suggestion has also been made by Farkas and Sugioka (1983) in their analysis of if/when clauses and Kroch (1974), although Farkas and Sugioka translate indefinite singular NP's on the

generic reading as the name of a kind. Heim (1982) suggests there is a sentential generic operator that binds indefinites). Thus, (9) is represented as in (10).

- 9) A donkey is stubborn  
 10) G, donkey (x), stubborn (x)

Following Carlson and Farkas and Sugioka, the G operator is vague concerning the number of assignments it takes to make the sentence true.

I suggest that bare plurals that co-occur with predicates that apply to individuals (what Carlson calls stages or objects) have a similar representation as in (12).

- 11) Donkeys are stubborn  
 12) G, donkey (x), stubborn (x)

However, like the above examples (4), (5) and (6), the restrictive clause may contain material besides just the common noun.

- 13) Shoplifters are prosecuted in criminal court  
 (Carlson, p.68)  
 14) G, shoplifter (x) & prosecuted (x),  
 prosecuted in criminal court (x)  
 15) A kangaroo gives birth to live young  
 16) G, kangaroo (x) & gives birth (x),  
 gives birth to live young (x)

In sum, the generic operator is characterized as an operator something like the adverb typically or generally, and with predicates that apply to individuals, generic indefinite NP's are variables (bound by such an operator) and conditions on those variables.

## 2. Comparison to Carlson's theory

Carlson (1982, 1977) accounts for the generic reading of a sentence containing a bare plural by translating the bare plural as the name of a kind. For

sentences that have predicates which are not inherently generic he posits an invisible aspectual marker that "generalizes" the verb. He argues against approaches that represent bare plurals as quantified NP's. I will discuss four of his arguments: the Port-Royal puzzle, the inadequacy of attempts to paraphrase the meaning of bare plurals with overt quantifiers such as all normal or most, and the ambiguity of sentences with adverbs of quantification and sentences containing disjunctions. I will show that it is possible to account for Carlson's data in the quantified approach suggested in section 1.

### 2.1 The Port-Royal puzzle

Example (1) is found in Port-Royal logic (Arnauld (1964/1664)).

- 1) Dutchmen are good sailors
- 2) Dutchmen are sailors

(1) does not entail (2). However, since good is a subsecutive adjective, the second sentence follows from the first sentence if we substitute John, all dutchmen, some dutchmen, or most dutchmen for the bare plurals.<sup>4</sup> Carlson takes this fact to show that no monotonic quantifier or conjunction of monotonic quantifiers captures the meaning of the bare plural. Siegel (1976) treats good as non-intersective and then adds a meaning postulate which guarantees, for example, that it follows from John's being a good sailor that he is a sailor. Carlson's formulation of the meaning postulate is in (3).

- 3)  $a'(\wedge b')(x) \rightarrow b'(x)$ , where  $a'$  translates adjectives of CAT CN/CN,  $b'$  translates any CN and  $x$  is an entity (p. 297)

Carlson's representation of (1) is:

- 4)  $G'(\wedge \text{good}'(\wedge \text{sailor}'))(d)$

Carlson argues that the structural description of the meaning postulate is not met by (4), because of the  $G'$  operator. However, for other adjectives including

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intersective adjectives, Carlson needs a meaning postulate to guarantee that the G' operator will distribute over the adjective and common noun, since entailments of the form in (3) are licensed. His example is elephants are gray mammals (1977, p. 298), which entails both elephants are gray and elephants are mammals. There is no way of telling which subsective adjectives are governed by the meaning postulate and which are not. The closest Carlson can come to distinguishing the two is to say that the ones that do not obey (3) such as good allow paraphrases with as (5) and are acceptable with the verb make (6).

- 5) Dutchmen are good as sailors
- 6) Dutchmen make good sailors

In contrast, adjectives that do obey (3) do not allow paraphrases with as or the verb make. (8) follows from (7), so veteran is subsective, but (9) and (10) are non-sensical.

- 7) New Yorkers are veteran subway riders
- 8) New Yorkers are subway riders
- 9) #New Yorkers are veteran as subway riders
- 10) #New Yorkers make veteran subway riders

These examples are also handled on the Heim/Kamp approach. Sentence (1) is represented as in (11).

- 11) G, dutchman (x) & sailor (x), good-sailor (x)

Sentence (2) does not follow from (11) as desired. The problem of finding an appropriate tripartite structure is resolved by the same mechanism that is used in sentences with overt adverbs. Once this is accomplished, the right predictions are made about the entailments of (1).

## 2.2 Overt NP quantifiers

Carlson argues that attempts to paraphrase the generic quantifier with an overt quantifier such as all normal (Bacon 1974, Dahl 1975) or most (Parsons 1970, Nunberg & Pan 1975) are inadequate. Attempts to paraphrase bare plurals as NP's containing a quantifier



such as all normal or most are motivated by the fact that generic sentences, although close in meaning to universally quantified sentences, are not truly universal because they are not falsified by one counterexample. Carlson presents the following data to show that all normal or most do not capture the range of meaning a bare plural NP can have.

- 12) Mammals give birth to live young.  
(All female)
- 13) Cardinals are red. (All male)
- 14) Shoplifters are prosecuted in criminal court.  
(Few are caught) (Carlson 1977, p.68)

The range of meanings for the bare plurals in (12) through (14) is captured on the proposed analysis, since the sentences can be paraphrased as follows: "all mammals that give birth, give birth to live young." Similarly, (13) is "all cardinals that are brightly colored, are red," and (14) is "all shoplifters that are prosecuted, are prosecuted in criminal court."

Bare plurals sometimes have the force of a universal. For example, inferences such as (15) seem to be valid.

- 15) Pedro is a donkey  
Donkeys are mammals  
Pedro is a mammal

Carlson argues that the intuitions that such an inference is valid follow from our knowledge about the world, i.e. we know that if one donkey is a mammal, then they all are (Carlson 1983). A meaning postulate for G' (Carlson 1977, MP10, P.415) only guarantees that if there have been donkeys, then some donkey must have been a mammal Carlson states, "There is no mention made of a necessary and sufficient number of times for some stage-level predicate P to hold of stages of x to say  $G(\wedge P)(x)$ ," (P. 274) (the operator G takes stage-level predicates to object-level predicates; the same hold for the G' operator which applies to objects). A similar statement is true for the sentential G operator, i.e. there is no mention made of a necessary and sufficient number of cases for which the sentence must hold.

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## 2.3 Ambiguities with adverbs of quantification

Consider a sentence that contains a bare plural under the scope of an adverb of quantification as in (16).

16) Dogs seldom bark

Sentence (16) means either, "It is seldom the case that dogs (as a kind) bark," or "Few dogs bark." Since bark is a predicate over individuals, both readings involve a variable translation for dogs. On the first reading, the generic operator binds the variable in the translation of dogs, and seldom binds an implicit variable over times.<sup>5</sup> On the second reading, the adverb of quantification binds the variable in the translation of dogs. Kratzer (pc) observed that Carlson's account of bare plurals as names of the kind and his treatment of adverbs of quantification gives the wrong reading for sentences that contain both. Carlson translates Texans are often tall as in (17), where t stands for the kind Texans.

17) Many' z [ R(z,t) & tall'(z) ]

(17) can be paraphrased, "many objects are texans and are tall."

## 2.4 Ambiguities with disjunction

Parsons first observed the ambiguity of (18).

18) Dogs are male or female.

On one reading the sentence is false; on a second reading it is true. The reading on which it is false has the paraphrase, "Dogs are male, or dogs are female." On the proposed analysis, the false reading is the result of giving the or scope over the generic operator. In contrast, if the generic operator has scope over the or, the representation contains an object-level predicate "is male or female." This representation corresponds to the reading of (18) that is true.

In this section, I have shown that the quantified treatment of bare plurals proposed here accounts for ambiguities with adverbs of quantification and

disjunction as well as some of the data that Carlson uses to rule out a treatment in which there is a null quantifier in the determiner of the bare plural NP.

### 3. Bare plurals and indefinite singular NP's

#### 3.1 Kind-level predicates

The bare plurals discussed in the previous sections were translated as individual variables and conditions on variables. As Carlson has observed, there are some predicates that apply to kinds that do not distribute over individuals.

##### 1) Pterodactyls are extinct

Sentence (1) is true, though it is strange to say that any particular pterodactyl is extinct. I agree with Carlson that the logical representation of (1) does not involve quantification over individuals, but I take this to show that the bare plural is ambiguous between a name of the kind meaning as in (1) and the representation containing a variable explained in the two previous sections.

A simple explanation for one difference between the bare plural and the indefinite singular is possible, since no ambiguity exists in the translation of the indefinite singular. They are always represented as variables and conditions on the variable. Since indefinite singular NP's never denote the name of a kind, it is expected that they are unacceptable as the subject of kind-level predicates. Carlson's data is given in (2) through (5).

- 2) Owls are common
- 3) \*An owl is common
- 4) Dogs are widespread
- 5) \*A dog is widespread (Carlson, 1977:284)

Carlson accounts for this fact by building a predicate restriction into the meaning of the indefinite article. The interpretation of dogs and a dog on Carlson's account are given in (6).

- 6) a. dogs' = 1P [ P(d)]  
 b. a dog' = 1P [ P(d) & ]S [ P = ^G'(^S)]

(6b) requires that any predicate that is allowed to apply to the NP a dog must be derived from an object level predicate by an application of the G' operator, which makes object level predicates into kind level predicates. On the proposed analysis, (6b) is unnecessary.

Furthermore, operators taking object level or stage level predicates to kind level predicates are redundant.<sup>6</sup> If a predicate is not inherently a kind level predicate, such as common or extinct, the predicate applies to a variable bound by the sentential G operator or an existential.

One difficulty with the analysis given here is that sentences with non-kind-level predicates applied to bare plurals or indefinite singular NP's should be ambiguous between generic and existential readings.

- 5) A dog is sick (existential only)  
 7) Dogs are sick (existential only)  
 8) A dog is intelligent (?generic only)  
 9) Dogs are intelligent (?generic only)

Carlson, in recent work (1986) and in his dissertation, observes that bare plurals with object-level predicates can get either an existential or a generic reading.

- 10) Hurricanes arise in this part of the South Pacific

Sentence (10) is more likely to have an existential reading of the subject, given the implausability of most or all hurricanes arising someplace in the South Pacific. Existential readings of indefinite NP's with object-level predicates are not ruled out on this analysis.

Generic readings of a dog and dogs in (6) and (7) must be ruled out. Since be sick is a stage level predicate, Carlson prevents such readings from arising by building the existential quantifier into the meaning of the verb. Since I am assuming that the existential is not part of the meaning of a stage level predicate, I rule out the generic reading of the existential

quantifier is possible. A stipulation must be made that the generic operator does not co-occur with stage-level predicates. One way to prevent this might be to restrict the generic operator to quantifying over entities from the object domain, though I will not pursue this possibility here.

### 3.2 Scope facts

Since the proposed analysis posits an ambiguity for bare plurals, the argument that they act like names in terms of their scopal properties is an argument in favor of Carlson's view. Scope facts suggest a difference in the behavior of bare plurals and singular indefinites, since wide scope existential readings are often unavailable for bare plurals. In this section, I will present several examples where existential readings are possible for the bare plural.

Consider the following data from Chierchia (1982).

- 11) a. Mary wants to meet some football players  
b. Mary wants to meet football players
- 12) a. A man is in this room and a man is not in this room  
b. Dogs are in the courtyard and dogs are not in the courtyard

According to Carlson sentences (11a) and (12a) have two readings, while the (b) sentences have only one. In (11b) football players receives a narrow scope reading. Carlson claims that (12b) has only a contradictory reading; however, speakers are able to get a second non-contradictory existential reading.

He also argues that a bare plural has narrow scope with respect to a frequency adverb.

- 13) a. Max killed a rabbit repeatedly last night  
b. Max killed rabbits repeatedly last night

In (13a) the indefinite NP has scope over the adverb, and the generic reading is not available. Carlson observes that in (13b) the adverb has scope over the indefinite NP. Still, the other scope possibility is available. Carlson claims that in (13b) the play that does

not bias us toward the wide scope reading of repeatedly.  
Consider (14).

- 14) Max played sonatas repeatedly last night  
(Partee, pc)

Here sonatas can have scope over repeatedly meaning each sonata that was played was played more than once.

Kratzer (1980) has shown that existential readings do arise for bare plurals in object position.

- 15) John wanted to put belladonna berries in the fruit salad, because he mistook them for cherries

Link (1984) also observed that with achievement verbs it is possible to get an existential reading.

- 16) John discovered interesting examples in two hours.

Recent work on "dependent" plurals (Partee, pc) shows that the bare plural has an existential reading when it is under the scope of a plural operator.

Sjaak de Mey (1981) discusses the phenomenon of "dependent plurals" as in (17) or Chomsky's (18).

- 17) Trains leave for Amsterdam every hour  
18) Unicycles have wheels

Sentence (17) is consistent with only one train leaving each hour. In spite of the fact that trains is syntactically plural, it may be semantically equivalent to the singular a train. Partee noticed that while policemen in (19a) gets only the narrow scope reading, (19b) has three readings, one kind reading similar to the reading of policemen in (19a) and two "dependent" plural readings.

- 19) a. Miles wants to meet policemen  
b. All the schoolboys want to meet policemen  
c. Miles wants to meet a policeman

The dependent readings show the same ambiguity as (19c). One has wide scope with respect to the verb and the other has narrow scope. They can be paraphrased as, "For each schoolboy, there is a policeman such that the schoolboy wants to meet him," and "Each schoolboy wants there to be a policeman such that the schoolboy meets him," respectively.

Following Partee, the dependent plural reading is separate from the Carlson bare plural. The dependent plural does not seem to denote a name of the kind. The bare plural is able to get a wide scope existential reading when it is under the scope of another plural NP.

#### 4. Unsolved Problems

The behavior indefinite NP's under a generic operator leads to the consideration of two further phenomena: additional scope facts and properties of singular indefinite NP's under conjunction. I do not see how to handle these on any existing theory.

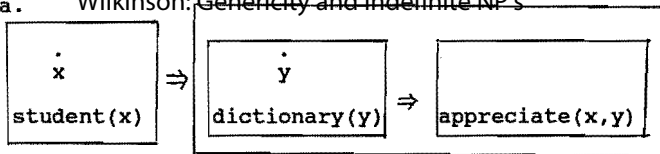
##### 4.1 Missing existential readings for indefinite singular NP's

Kamp (1985) suggests a way of treating the indefinite singular generic in DR Theory. Consider the following data. Examples (1a) and (1b) are similar to Kamp's examples, and (1c) is taken from Farkas and Sugioka (1983).

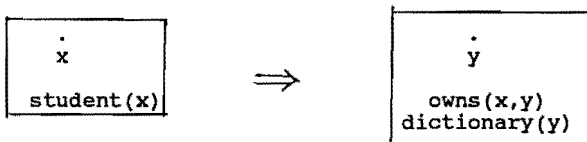
- 1) a. A serious student owns a good dictionary
- b. A serious student appreciates a good dictionary
- c. A good student admires a fair professor

Kamp points out that the object in (1a) can be interpreted as having existential force, while the object in (1b) (and (1c)) seems to be bound by the generic quantifier. He suggests that the generic operator (sentential by assumption) induces a box splitting operation similar to that of the universal quantifier. The difference in quantificational force of the objects can then be accounted for by rules which guarantee that either the object will induce a second box splitting giving it universal or generic force as in (2a) or it will be existentially quantified in the

2) a. Wilkinson: Genericity and Indefinite NP's



b.



(Kamp 1985, p. 59)

These two options do not depend on the subject being generic since, the same two readings arise for the objects of own and appreciate in the sentences in (3). (3c) is ambiguous.

- 3) a. John owns a good dictionary  
 b. John appreciates a good dictionary  
 c. John admires a fair professor

The verb appreciate patterns like the intensional verb seek, in that it is not extensional with respect to its object.

Still, sentences similar to those in (3) have a wide-scope existential reading while those in (5) do not.

- 4) a. John has a good teacher, namely Smith  
 b. ?John appreciates a good teacher, namely Jones  
 5) a. \*A good student has a fair professor, namely Smith  
 b. \*A good student appreciates/admires a fair professor, namely Jones

To get an interpretation at all for (5a) and (5b), we must also interpret the subject NP's as specific. Thus, only readings where the existential has narrow scope with respect to the generic operator are allowed. This is not the case with every.



- 6) Every student admires/appreciates a good teacher,  
namely Jones

A wide-scope existential or at least a referential reading of an indefinite is not allowed under the scope of a generic operator.

#### 4.2 Conjunction

The indefinite singular has a more limited distribution than the bare plural. This is expected, since the indefinite singular cannot be a kind denoting term. The indefinite singular differs from the bare plural in the extent to which context effects the acceptability of the generic reading; the bare plural requires almost no special "generic" context, while the indefinite singular is often difficult to get without some additional context. Although for some speakers (7a) is acceptable on a generic reading, (7b) is odd (Perlmutter (1968) first observed this). Both (7c) and (7d) are fine.

- 7) a. A donkey is stubborn  
b. #A donkey and a mule are stubborn  
c. Donkeys are stubborn  
d. Donkeys and mules are stubborn<sup>8</sup>

Similarly:

- 8) a. A canary sings  
b. #A canary and a robin sing  
c. Canaries sing  
d. Canaries and robins sing

The contrast in (9) due to Partee (pc) suggests that the indefinite singular prefers a group reading.

- 9) a. A bed and a dresser cost more than a table  
and a chair  
b. Beds and dressers cost more than tables and  
chairs

Sentence (9a) means "A bed and a dresser together cost more than a table and a chair together," while (9b) has a reading where the beds and dressers do not be read as a

group.<sup>9</sup>

The acceptability of of the conjoined NP with a collective predicate provides further evidence that the NP is getting a group reading.

10) A horse and a donkey can mate

## 6. Conclusion

I have shown that a Carlson-like analysis of the bare plural can be maintained in conjunction with a Heim/Kamp analysis. The indefinite singular is unambiguously given a Heim/Kamp type treatment, though it appears to be ambiguous, since it can be bound by any operator that has scope over it. The bare plural is ambiguous between a translation as a variable and the name of the kind interpretation. Accounting for the distribution of the NP's raises some questions about how to account for the co-occurrence restriction between the generic operator and stage level predicates and also questions about the puzzling behavior of the conjunction and the scope of indefinite singulars.

\*This paper would not have been written without the help of Angelika Kratzer and Barbara Partee. Thanks also to Emmon Bach, Steve Berman, and Lyn Frazier for helpful comments.

1. An indefinite singular NP can have what is called, following Fodor and Sag (1982), a "specific" or "referential" reading as in (i).

i) A woman I know walked into the room

2. Similar facts hold of vague determiners such as many and few. So, (i) is valid on a reading such as (ii), but (iii) is not, assuming a proportional reading for many.

i) If many men entered the race early, many men entered the race

ii) If [many, men (x), entered the race early (x)]  
then [many, men (x), entered the race (x)]

iii) If [many, men (x) & entered the race (x), entered the race early(x)]  
then [ many, men (x), entered the race (x)]

The antecedent of (iii) would mean "among the men who entered the race, many entered the race early," while the antecedent of (ii) is "among men, many entered the race early. Barwise and Cooper (1981) guarantee that (i) is valid by a Fixed Context constraint. The Fixed Context constraint considered from a Lewis-Heim perspective amounts to a constraint on what can be in the restrictive clause, namely only material contributed by the NP containing the quantifier and crucially not material from the predicate.

3. I am not attempting to give a semantics for plurals here, but I am assuming there is a natural extension of the Heim/Kamp approach to indefinites to plural indefinites. For more discussion of plurals, see Link (1983), Hoeksema (1983), Schein (1986), and references cited there.

4. Chierchia (1982) points out that if the generic quantifier were a non-monotonic quantifier, it would violate Barwise & Cooper's Monotonicity Constraint, "The simple NP's of any natural language express monotone quantifiers or conjunctions of monotone quantifiers." (1981, p.187) Barwise and Cooper state, "In discussing these universals we shall restrict ourselves largely to simple NP's of English: Proper nouns, a single

determiner element followed by a common count noun and basic count words like men and everybody," (p.176) and furthermore, "The notion of simple NP is well-defined only within the context of a given syntactic analysis." (footnote 6, p. 216)

However, context dependent quantifiers in general constitute an apparent violation to this constraint. The monotonicity constraint holds only so long as we observe the Fixed Context constraint. Barwise and Cooper (1981) state, "In this paper we shall assume throughout that there is a rich context held fixed that determines the precise meaning for basic expressions, even those like "most", "many" and "few"." (p. 163) Thus, if we allow the context to change in the evaluation of the antecedent and the consequent, (i) in footnote 2 will be true in some situations and false in others.

5. I am ignoring the treatment of tense for the present purposes.

6. Carlson's G operator also raises a stage level predicate to an object level predicate as follows. Bill ran on the event reading is translated as (i), where b stands for the individual constant denoted by Bill. The characteristic reading is given in (ii).

i)  $\lambda z [R(z,b) \ \& \ \text{run}'(z)]$

ii)  $G(\text{'run}')(b)$

This part of the function of Carlson's aspectual marker is not taken over by the sentential G operator proposed here.

7. In order for such a proposal to work, all predicates such as dog(x) and bark(x) have to be ambiguous between whether they apply to stages or objects. Another more drastic possibility is to eliminate stages completely, but then I'm not sure how the restriction would be stated, since it would have to be a co-occurrence restriction between the generic operator (that should be able to occur wherever existential closure is allowed) and a predicate in the matrix clause.

8. The same sentences in German suggest an and/or confusion as Angelika Kratzer has suggested to me. Sentences such as Ein Esel und ein Maultier sind storrisch are bad on the generic reading (for most of the speakers I asked). The difficulty arises with the number agreement on the verb. There is a strong tendency to put the verb into the singular rather than the plural, but NP's conjoined by and require a plural verb. So, the intended connective may be or rather than and. The interpretation seems to be that of wide scope or in

any case. Lyn Frazier has work in progress on such confusions. Thanks to Lyn Frazier for help in constructing the canary examples in (10). Thanks also to Armin Mester, Maire Noonan, and Gert Webelhuth for judgements of the German data.

9. But even where they are not interpreted as a group, focus on the predicate makes the sentence in (a) more acceptable.

a) ?An icy road and a wet floor are slippery.

Similarly, the dialogue in (b) makes (ii) seem less odd than same sentence (9b) in isolation.

b) i. What kind of animals are stubborn?

ii. Well, a donkey and a mule are stubborn

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