

## The Singular-Plural Distinction In Hindi Generics\*

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### I. The Dichotomy in NP Based Genericity

#### 1.1: The Dichotomy in English

Recent work on generics has shown that genericity is not a uniform phenomenon but involves interaction between the semantics of the noun phrase and the tense-aspect system of a language (see Krifka 1992 for a survey and discussion). This paper focuses on the genericity which is tied to the noun phrase. By this I mean NP's which can serve as arguments to true kind predicates such as *extinct*. As noted by Krifka, this diagnostic distinguishes the definite singular NP and the bare plural in English from the indefinite singular NP. While the former are truly kind denoting, the latter is not, as shown by the fact that (1c) has only a taxonomic reading:

- (1) a. The dinosaur is extinct.  
b. Dinosaurs are extinct.  
c. A dinosaur is extinct.

A question that has remained relatively unexplored is the relationship between the two kind denoting terms, i.e. between the definite generic and the bare plural. While there is a considerable degree of overlap between the two, there are also some striking differences (Heny 1972, Lawler 1973, Vendler 1971, Carlson 1977, Krifka 1992 among others).

As noted by Carlson (1977), for example, definite generics do not readily allow for stage-level interpretations. (2a) has only a non-generic definite reading, while (2b) allows for an indefinite reading.

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- (2) a. The lion is roaring.  
 b. Lions are roaring.

Another fact discussed by Carlson is that the definite generic is less productive than the bare plural. It seems to be restricted to "well-established" kinds as shown by (3) and (4):

- (3) a. The coke bottle has a narrow neck.  
 b. Coke bottles have narrow necks.
- (4) a. The green bottle has a narrow neck.  
 b. Green bottles have narrow necks.

While the variation between the definite NP and the bare plural does not affect genericity in (3) it does affect it in (4). The definite NP in (4a) has only a non-generic definite interpretation while the bare plural in (4b) is easily interpreted as a generic.

Carlson also discusses the fact that a common noun which is too general does not have a definite generic counterpart. Thus (5a), which has a definite generic, is an odd sentence but (5b), which has a bare plural, sounds quite natural:

- (5) a. The airport is a busy place.  
 b. Airports are busy places.

In this paper I will introduce two types of generics in Hindi which show a relationship very similar to that between the definite generic and the bare plural in English. The novel fact about them is that the morphology makes it clear that the difference between the two must be tied to the number feature. In what follows, I hope first of all to establish that the distinction between the two kind denoting terms is the same in Hindi as in English. Second, I wish to explore ways in which the number feature may impact on the interpretations of generic terms.

## 1.2: The Dichotomy in Hindi

Hindi has bare singular and bare plural NP's which are known to have generic, definite and indefinite readings, as noted by Verma 1966, Porterfield and Srivastav 1988 (henceforth P&S) and Mohanan 1990.<sup>1</sup> The generic use is demonstrated in (6):

- (6) a. kuttaa aam jaanvar hai  
       dog common animal is  
       "The dog is a common animal."  
       b. kutte yehāā aam hāī  
       dogs here common are  
       "Dogs are common here."

The definite use is shown in (7) below:

- (7) a. ravi ek laRkii se milaa. laRkii bahut acchii thii  
       Ravi a girl met. girl very nice was  
       "Ravi met a girl. The girl was very nice."  
       b. ravi kuch laRkiyō se milaa. laRkiyāā bahut acchii thīī  
       Ravi some girls met. girls very nice were  
       "Ravi met some girls. The girls were very nice."

Finally, the indefinite use is illustrated in (8):

- (8) a. anu kitaab paRh rahii hai  
       Anu book reading is  
       "Anu is reading a book/books."  
       b. anu kitaabē paRh rahii hai  
       Anu books reading is  
       "Anu is reading books."

My primary concern in this paper is the generic-indefinite variation of bare NP's. A comparison of bare singulars with bare plurals leads us to recognize that the constraints on the availability of indefinite readings for bare

<sup>1</sup> I am ignoring in this paper the contrastive reading of such NP's, which are affected by intonation and may be related to focus structure. The readings discussed here are available without special stress.

singulars and bare plurals are very different. And further that this difference results from the fact that bare singulars and bare plurals denote different types of generics.

Briefly, I will claim that bare plurals are kind-level terms linked to their instantiations in a given world and hence to stages of such instantiations. The availability of indefinite readings is tied only to syntactic factors like tense and aspect which determine whether evaluation will take into account the individual or its stage.

In contrast, bare singulars are kind-level abstract entities which are not related to actual instantiations. The indefinite reading of bare singulars is available only in specific syntactic contexts or under very special discourse conditions. The difference in the availability of indefinite readings of bare plurals and bare singulars arises from the fact that in the first case only syntactic factors are at play, while in the second case a combination of syntactic and discourse factors are operative.

It is already clear, I think, that Hindi bare singulars pattern with English definite generics, Hindi bare plurals with English bare plurals with respect to the availability of indefinite readings. Since English marks one type with the definite article and leaves the other one bare, definiteness marking presents itself as one obvious area of inquiry but I think this is a red herring. Hindi generics provide a better clue to what may be at the heart of the problem. Since neither the singular nor the plural is overtly marked for definiteness in Hindi, and both are capable of definite interpretation, the distinguishing factor between the two types of genericity clearly cannot have to do with definiteness. The Hindi facts thus indicate that the proper locus of inquiry for distinctions in genericity must be the number feature.

## II. Hindi Bare NP's

### 2.1: An Analysis For Bare Singulars

Let me begin by summarizing the analysis of bare singulars in P&S, which represents a first attempt at reducing the three-way ambiguity displayed in (6)-(8). I will then show why the specifics of their analysis does not extend to Hindi

bare plurals. P&S take the bare singular to be ambiguous between the definite and the generic and I will assume the same for purposes of this talk. Let us say, for the sake of convenience, that Hindi has a null determiner, which analogous to English *the* carries uniqueness implications. Its meaning can be captured via the iota operator. In addition, Hindi also allows bare singular NP's which denote kinds, in the terminology of Carlson. This ambiguity accounts for the variation between (6) and (7).<sup>2</sup> It is with the generic-indefinite variation, however, that I am chiefly concerned with here.

P&S note that while the indefinite reading is available when the bare NP is in object position as in (8a), it is not available when the bare NP is in subject position, as in (9) below. The tense being episodic, the only available interpretation is the definite one<sup>3</sup>:

- (9) \* laRkii khaRii thii  
       girl standing was  
       "A girl was standing."

They propose that the basic reading of the bare NP is that of a generic. When the NP is in object position, they argue, it is possible to interpret it as a generic and still get a pseudo-indefinite reading. In (8a), for example, the verb phrase can be treated as the predicate "book-reading", where the bare NP is a kind-level term. If someone engages in the activity of book-reading, however, it follows that there must be a book or books that she is reading. Thus the indefinite reading is inferred. The absence of an indefinite reading in subject position as in (9), they claim, is due to the fact that predicates are sorted with respect to the type of NP they can take as argument. Generic tense takes individual level arguments while episodic tense takes stage level arguments. The grammaticality of (6a)

<sup>2</sup> A question that I will not pursue here is why bare NP's should be ambiguous between a definite and a generic. Ideally, there would be a way of deriving the definite reading from the generic reading since to the best of my knowledge such an ambiguity exists for bare NP's cross-linguistically.

<sup>3</sup> There is an indefinite reading for (9) which is equivalent to "It was a girl who was standing". This I classify with the contrastive readings which I am not concerned with in this paper.

follows from the fact that there is sortal matching between subject and predicate and the ungrammaticality of (9) from the fact that there is a mismatch between a stage-level predicate and a kind-level argument.

Another argument for treating the indefinite reading in (8) as deriving from a generic reading is provided by introducing an adverbial and comparing the sentence with a bare NP with a sentence with a regular indefinite:

- (10) a. anu pure din machlii pakaRtii rahii  
 Anu whole day fish kept catching  
 "Anu kept catching fish the whole day."  
 b. anu pure din ek machlii pakaRtii rahii  
 Anu whole day one fish kept catching  
 "Anu kept catching a fish the whole day."

(10a) leaves it open whether Anu spent the day catching one or more fish but (10b) restricts interpretation to Anu's catching a single fish. This diagnostic, though not discussed by P&S, is familiar from Carlson's work on bare plurals in English and fully supports the view espoused in P&S that there is no independent indefinite reading of the bare singular.

## 2.2: The Problem with Bare Plurals

While I believe the basic insight in P&S to be right, the analysis faces a serious problem when we try to extend it to bare plurals in Hindi. Consider the plural counterpart of (9) where the verb has episodic tense and the subject is a bare plural:

- (11) laRkiyaa khaRii thii  
 girls standing were  
 "Girls were standing."

Under the line of argumentation sketched above, this sentence should be ruled out as a case of sortal mismatch, on a par with (9) but the bare plural is quite grammatical here. In fact, it behaves exactly like the English bare plural in the translation. In Carlson's analysis of English bare plurals this follows from

the semantic operation which maps the bare plural, an individual-level entity into the stage-level entities which realize the kind at the given time and location. The explanation for the ungrammaticality of (9), however, hinged on the assumption that such an operation was not available in Hindi.

The problem, then, can be stated in the following way. If we follow the traditional Carlson analysis where kind level terms can type shift into their stage level correlates for Hindi bare plurals in (11) we lose the explanation for the ungrammaticality of (9). If we follow the account for (9) in P&S which suggests that Hindi differs from English in not having type-shifting operations from kinds to stages we make an incorrect prediction with regard to (11). An obvious solution to the problem is to say that the realization relation is universally available with episodic tense but is undefined for singulars. But this, of course, is pure stipulation unless we can find a principled reason for blocking the realization relation from applying to singulars.

It may be worth mentioning here that though I have articulated the problem using terminology from Carlson, the question of why the two generic terms should behave differently with respect to indefinite readings is a general one and remains in theories, such as those stemming from Heim (1982), which deal with the generic-indefinite variation in other ways. In trying to resolve this problem I will use the specifics of Chierchia (1982, 1984). In this theory all predicates are systematically linked to kind-level terms by a nominalization operation. Thus predicates are linked via their predicate intensions to kind-denoting expressions. Stages are treated as values of the objects that instantiate the kind at a given world-time index. A single relation *Re* replaces Carlson's *R* and *R'* which linked kind and object, respectively, to their stages.

### 2.3: Mass Terms

Chierchia's theory also extends Carlson's analysis of bare plurals to mass terms. Before going any further, then, let me broaden the range of data to include mass terms in Hindi. In

(12) we see that mass and count nouns, all of which may be bare, can occur in predicative positions in Hindi:

- (12) a. yeh sonaa hai  
 "This is gold."  
 b. moti kuttaa hai  
 "Moti is a dog"  
 c. moti aur hiraa kutte hãĩ  
 "Moti and Hira are dogs."

They can all serve as arguments of kind-level as well as object-level predicates:

- (13) a. sonaa aam dhaatu hai  
 "Gold is a common mineral."  
 b. kuttaa aam jaanvar hai  
 "Dog is a common animal."  
 c. kutte yahãĩ aam hãĩ  
 "Dogs are common here."

- (14) a. sonaa pilaa hotaa hai  
 "Gold is yellow."  
 b. kuttaa bhaunktaa hai  
 "The dog barks."  
 c. kutte bhaunktee hãĩ  
 "Dogs bark."

The difference comes up in stage-level contexts, where the singular does not yield an indefinite interpretation:

- (15) a. yehaa sonaa rakhaa hai  
 "Gold is lying here."  
 b. kuttaa bhaunk rahaa hai  
 "The dog is barking."  
 c. kutte bhaunk rahee hãĩ  
 "Dogs are barking."

Since mass terms pattern with plurals in allowing for indefinite interpretations with stage-level predicates, the problem raised earlier can be refined and restated in the



following way. Since plural and mass nouns allow for indefinite readings but singular nouns do not, we need to investigate why the realization relation is available with episodic tense for the former but is undefined for the latter.

#### 2.4: The Solution

Let us assume the now standard view, proposed first by Link (1983), that there are singular and plural individuals in the domain of discourse and that singular count nouns pick out atomic individuals while plural count nouns pick out plural individuals which have atomic individuals as parts. This division is blurred for mass nouns since they do not have atomic elements. Technically they are plural since they do have parts but at the intuitive level we think of them as unspecified for number simply because they lack the dimension, i.e. the level of atoms, which would make the singular-plural distinction cognitively significant. In order to tackle the problem at hand we simply classify mass terms as plural terms in virtue of the fact that they do have parts, though they do not have atomic individuals as parts.<sup>4</sup> We can then make the straightforward assumption that the number feature on a noun determines whether it will refer to an atomic or a non-atomic individual. In the case of generics we might say that the number feature determines whether the instantiations of the kind-level entity in a given world will be an atomic or a non-atomic individual.

To take concrete examples, the sentences in (12) require *Re* to apply to the generic terms since the tense is episodic. That is, interpretation will need to access the value of *Re*(<sup>^</sup>*gold*'), *Re*(<sup>^</sup>*dog*') and *Re*(<sup>^</sup>*dogs*') respectively. In the case of (12a) and (12c), this yields the mass of gold that instantiates the kind *gold* and the group of dogs that instantiates the kind *dog* at the relevant world-time indices. The indefinite reading

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<sup>4</sup> Chierchia's treatment of mass terms is stated as extending Carlson's theory of bare plurals to singular terms. Because English does not use singular count nouns as NP's, he uses the term *singular* to refer to mass terms which are syntactically singular. His treatment, however, maintains the view that mass terms are semantically like plural count nouns in being composed of parts.

picks out the mass of gold in the plate as part of the total mass of gold and the group of dogs barking as part of the group of dogs in the world. In the case of (12b) the number feature specifies that  $Re(^{dog})$  be a singular individual. But the inherent meaning of a kind suggests that there should be more than one instantiation of it at any world-time index. We may assume that  $Re(^{Dog})$  is undefined because the number feature clashes with the presuppositions associated with a kind term.

A word of clarification about the restriction imposed by number. A kind can, of course, be instantiated by a unique object if there are enough contextual factors narrowing down the domain of discourse. But that, of course, is tantamount to the definite reading, which (12b) has. Recall that for ease of exposition I am assuming an optional null determiner in Hindi, which functions like the *iota*. This optional null determiner also accounts for the definite readings that (12a) and (12c) have in addition to the indefinite readings.

Before proceeding further, it may be worthwhile to see how (10) and (11) are to be interpreted. Assuming that  $^{gold}$ ,  $^{dog}$  and  $^{dogs}$  each is a kind term formed out of predicate intensions denoted by the common noun accounts straightforwardly for (10) since the predicates involved directly take kinds. But in the case of (11) we have a predicate that requires an object level term. If  $Re$  is not defined for singular terms, the only object level interpretation for the bare singular in (11b) will be provided by *iota*, yielding the definite reading. That is, it will be a habitual sentence about a specific dog. But clearly this sentence is also generic. The solution to this problem lies in what we take as the locus of genericity here. These are what Krifka (1992) calls characteristic sentences and analyses as involving quantification over situations. Though *iota* will yield a unique dog per situation, since many situations enter into the evaluation of (11b), the excessively strong uniqueness implications will be diluted. Hence the generic flavor of these sentences.

To recap briefly, the approach I have outlined exploits the mismatch between the inherent nature of the generic and the morphological restriction imposed by the number feature to account for the difference between plural and mass terms on the one hand and singular terms on the other with respect to

contexts in which stages of kinds are involved. It differentiates between a singular kind-level term which does not have actual instantiations in any given world and mass and plural generics which are kinds systematically linked to actual instantiations.

### III. "Indefinite" Readings of Hindi Bare Singulars

#### 3.1: Incorporated Bare Singulars

Recall that Hindi bare NP's in object position are able to yield indefinite readings. So in (8a) there is no specific book that Anu is reading. Recall also that P&S analyse the predicate in this sentence as a complex noun-verb combination. That is, they derive the indefinite reading from the incorporated verb "to book-read".

One robust manifestation of this claim is that there is no restriction of number. (8a), for instance, is quite compatible with Anu reading one or more books. This is in contrast to the use of the bare plural in (8b) where the indefinite interpretation is restricted to at least two books. Since singular terms are generally not used in Hindi to refer to a plurality of objects, it seems implausible to suggest that the number requirement is suspended in just this context. The facts, however, are as expected under an incorporation account.

A second piece of evidence that is relevant here is that the bare singular must be close to the verb in order for the indefinite reading to be available.<sup>5</sup> Consider (13a) which has the canonical word order for ditransitive structures. That is, the indirect object is not next to the verb. The bare singular indirect object here has only a definite reading:

- (13) a. anu bacce-ko khilaunaa degii  
 Anu child-DAT toy will give  
 "Anu will give toy(s) to the/\*a child."

<sup>5</sup> It is not clear whether such incorporation takes place in the lexicon or in the syntax but see Mohanan (1990) for pertinent discussion. In either case, an adjacency requirement for incorporation is to be expected.

In contrast, a bare plural indirect object readily allows for an indefinite interpretation:

- (13) b. anu baccō-ko      khilone degii  
           Anu children-DAT toys    will give  
           "Anu will give toys to the children/children."

Under the present approach, the operation mapping kind to stage is defined for plurals. *Re*(<sup>^</sup>children'), in this example, picks out the plural individual that instantiates the kind and the indefinite reading denotes some non-atomic part of it. Closeness to the verb is not at issue since the indefinite reading does not arise via incorporation.

Assuming an adjacency requirement for incorporation, in combination with the view that singular kind terms, unlike plural kind terms, are not linked to actual instantiations thus accounts for the contrast noted here with respect to the indefinite readings of bare NP's.

### 3.2: "Representative Object" Readings

Let us consider next a set of examples with "indefinite" readings for bare singulars that cannot be reduced to incorporation. Consider (14a) from P&S. Here the postposition *-se* after the bare singular makes an incorporation analysis implausible. Yet it has, in addition to a definite reading, also an indefinite reading:

- (14) a. anu DaakTar se      shaadii karegii  
           Anu doctor    with marriage will do  
           "Anu will marry a doctor."

Anu could not be marrying the kind *doctor* but some individual who instantiates the kind. How does this fit in with the view that *Re* is not defined for singulars? Clearly, some modification is in order but I do not think the basic idea has to be given up.

A further fact noted by P&S is relevant in understanding what is going on. (14a) has a variant in which an overt indefinite is used, given below in (14b). While (14a) seems to

disfavor a continuation like (14c) which has an anaphor referring back to the bare singular, (14b) readily allows it:

- (14) b. anu ek DaakTar se shaadii karegi  
 Anu a doctor with marriage will do  
 "Anu will marry a doctor."  
 c. uskaa naam ravii hai  
 his name Ravi is  
 "His name is Ravi."

The answer to the puzzle posed by these examples begins to emerge if we try to understand what discourse factors would determine whether (14a) or (14b) should be used. As far as I can tell, (14a) would be used in the following type of context:

- (15) Anu's father is a doctor and Anu lives in his shadow.  
 The speaker is sure that the only type of person she will marry will be a doctor, since her father is a doctor.

What the context tells us, then, is that the bare NP refers not to any particular individual but to an instantiation who would be representative of the kind. This explains the subtle difference in interpretation between (14a) and (14b) as well as the difference with respect to anaphora. We might say, that only under special circumstances, *Re* may be defined for singular kinds resulting in what Krifka (1992) calls "the representative object" reading.

Another fact relevant in this connection is provided by (16), also from P&S. This represents a slight modification of (14a) in that the NP includes the adjectives "tall" and "poor". This modification results, however, in the loss of the indefinite reading:

- (16) vo lambe gariib DaakTar se shaadii karegi  
 she tall poor doctor with marriage will do  
 "She will marry the/\*a tall, poor doctor."

I think this fits in with the view that the bare NP does not have a bona-fide object level interpretation. Since the object is important only to the extent that he represents the kind *doctor*,

it is not unexpected that the mention of properties that are not the natural properties of the kind should be at variance with the intended meaning of the utterance.

Before wrapping up this point, let us consider the plural counterparts of (14a) and (16), given in (17a) and (17b). (17a) shows that anaphora to bare plurals is not problematic and (17b) shows that indefinite readings are possible even with modified noun phrases:

- (17) a. anu Daaktarō-se baat kar rahii hai lekin unke naam  
           maĩ nahī̃ jaantii  
           "Anu is talking with doctors but I don't their names."  
       b. anu lambe gariib daktarō-se baat kar rahii hai  
           "Anu is talking with tall poor doctors."

Finally, it is worth noting that "the representative object" reading is not always available. Thus the bare singular in (18a) has only a definite reading while the bare plural in (18b) has a definite as well as an indefinite reading:

- (18) a. pradhān mantri vidyarthii-se milī̃  
           prime minister student with met  
           "The prime minister met with the student."  
       b. pradhān mantri vidyarthiyō-se milī̃  
           prime minister students with met  
           "The prime minister met with students."

While we do not know why "representative object" readings are not always available, the contrast between (18a) and (18b) shows once again that the indefinite readings of bare plurals is not subject to the same constraints as those for bare singulars.

Though I have not presented an account of incorporation in Hindi or of the "representative object" readings, I hope to have shown in this section that there are far stricter constraints on an indefinite reading for a bare singular than for a bare plural. The factors governing the indefinite reading for bare singulars include, in addition to a predicate which allows for such an interpretation, an appropriate discourse context. For bare plurals, the constraints are purely grammatical. Any syntactic context that calls for stages of kinds yields an

indefinite reading. This, I am claiming, is because *Re* is normally undefined for singulars but always defined for plural terms.

#### IV. Further Issues

##### 4.1: Number vs. Definiteness Marking Crosslinguistically

The discussion so far would have made it amply clear, I think, that there is significant similarity between the Hindi bare singular and the English definite generic. In fact, this parallel was noted in P&S, who classified it as a D-generic in terms of Krifka (1988), drawing attention to examples like (19a) and (19b):

- (19) a. agar bacce-ka pet bharaa ho, vo aaram se sotaa hai  
           if child's stomach full be he easily sleeps  
           "If the child's stomach is full, he sleeps easily."  
       b. kal       caar se nau ke biic mē jabbbhi cor  
           yesterday four from nine between whenever thief  
           ghar me ghusaa pulis-ne use pakaR liyaa  
           house in entered police him caught.  
           "Yesterday between four and nine whenever the thief  
           entered the house, the police caught him."

They pointed out that the bare singular, like the English definite generic in the translation, is alright with generic tense but not with episodic tense. They did not, however, offer any explanation for why this should be so. Under the present view, however, there is an explanation for this fact.

(19a) involves quantification over situations. Though *Re*(<sup>child</sup>) is undefined, *iota*(<sup>child</sup>) is not. A generic interpretation is possible since quantification over situations cancels out the uniqueness normally associated with the *iota*. (19b), on the other hand, is episodic. The contextual parameters being set, there is only one possible individual that can be denoted by *iota*(<sup>thief</sup>). The oddness of the sentence arises from the semantics of the adverb *whenever* which requires several instances of house-breaking and arrest. If

there is only one thief he would have to be released each time he was arrested so that he could be arrested and released again, resulting in a pragmatically odd sentence.

Note that, as expected, the plural counterpart of (19b) is not odd. The English translation is again representative of the Hindi facts:

- (19) c. kal caar se nau ke biic me jabbhi cor  
 yesterday four from nine between whenever thieves  
 ghar me ghuse pulis-ne unhe pakaR liyaa  
 house in entered police them caught.  
 "Yesterday between four and nine whenever thieves  
 entered the house, the police caught them."

This is because *Re*(<sup>^</sup>*thieves*) yields a plural individual, different non-atomic parts of which can be involved in each instance of house-breaking and arrest.

If I am right in taking number marking to be the critical factor in determining whether a generic will yield indefinite readings, it makes some strong cross-linguistic predictions. Languages like French and Italian have singular and plural generics both of which are marked with a definite determiner. The Italian sentences in (20), however, have the same interpretations as the English and Hindi counterparts:

- (20) a. se la pancia del bambino e' piena, lui dorme bene  
 "If the stomach of the child is full, he sleeps well."  
 b. Ieri tra 4 e le 9 ogni volta che il ladro e' entrato,  
 la polizia lo ha arrestato  
 "Yesterday between four and nine, each time the thief  
 entered, the police arrested him."  
 c. Ieri tra 4 e le 9 ogni volta che i ladri sono entrati,  
 la polizia li ha arrestati  
 "Yesterday between four and nine, each time the thieves  
 entered, the police arrested them."

Obviously, the function of the definite determiner in Italian is different from English *the* in not having uniqueness implications. It may be that the Italian definite determiner is simply a theme marker, as has been suggested for French by



Kleiber (1990). What is significant about Italian for the present analysis is that it too shows that it is the singular-plural distinction and not definiteness which impacts on the availability of "indefinite" readings for kind-level terms.

In fact, it is a prediction of the analysis that any language in which there are singular and plural generics will allow for indefinite readings more readily for the plural than for the singular. A language in which the singular generic was bare and allowed for indefinite readings while the plural generic was definite and resisted such readings -- that is, a language that reverses the pattern of English -- is not expected.

#### 4.2: Productivity of Singular and Plural Kinds

So far I have been arguing for the importance of number marking in interpreting kind-level terms in contexts that call for stages. That is, I have been concerned with showing that it is the number restriction on *Re* that makes it undefined when applied to the singular kind. I would now like to explore briefly the possibility that number marking may also account for the observation noted in examples (3)-(5) that the English bare plural is more productive than the English definite generic. I think it would be clear from the preceding discussion that similar observations hold for Hindi and as far as I know this is also the case for Italian and French. So let us rephrase the observation to read that singular kinds are more restricted than plural kinds.

If there is a common nominalization operation that applies to all predicative terms, it is not obvious that there should be any difference in productivity. Now, there are two possible areas where the number marking could impact in the process of mapping predicate into kind, the predicative expression which is the input to nominalization and the kind term which is the output. I assume that a singular predicative expression denotes a property of atoms while the corresponding plural expression denotes a property of sums of the same atoms. The informational content of the two is not significantly different. Thus the impact of number marking on the input expression is unlikely to be critical.

Suppose, however, that number marking impacts on the output of nominalization, singular number forcing the resulting nominalized expression to be also atomic. The nominalization will then have to be of a type that does not preserve a direct link between the kind and the objects that are the basis of kind formation. This could be if the resulting kind expression was the name of the genus. Let us consider what it means to be a genus. The dictionary defines this as a class of like objects or ideas, having several sub classes or species. If the line of reasoning presented here is on the right track, it follows that the nominalization operation will be freely available and singular kind formation will be readily formed out of singulars as long as the resulting expression can belong in a taxonomic hierarchy.

Consider the contrast in (3)-(4) from this perspective. It is true that a priori *the coke bottle* but not *the green bottle* yields a generic interpretation. But take the following situation. You are on a tour of a plant which makes bottles and the tour guide says, "we manufacture three types of bottles at this plant, green, blue and clear. The green bottle is our particular speciality. It has a long neck." I think there is no problem now in a generic interpretation for the singular term. What the discourse does is to set up the appropriate context in which the green bottle can be thought of as a proper subkind of the kind *bottles*.

The degree of acceptability of such terms, then, is a direct function of our ability to access the taxonomic hierarchy of which the term is a subkind. But this is not a fact about our language competence but a fact about our world knowledge. To confirm this, consider the ease with which we accept the singular generic in "The German consumer is very thrifty", where we interpret *the german consumer* as a subkind in the taxonomy of consumers classified by nations. This is the market analyst's taxonomy but in the world we live in we are able to access it very easily. Surely, *the german consumer* as a generic term would be as problematic as *the green bottle* if we lived in a world where international trade was unknown. Similarly, I believe the difficulty of interpreting singular expressions which are too general generically, as in (5a) is not a linguistic fact. Thus it seems to me that the lack of

productivity of the singular generic noted in (3) - (5) is not a generalization about its semantics, but about contexts of use.

Put another way, I believe that the only semantic difference between the singular kind and the plural kind is in their relation to objects, the singular kind "denotes the species itself" while the plural kind denotes the "members of the species", to use the words of Jespersen (1927). While their property sets are not very different, in some sense the singular generic is more abstract than the plural generic. Because of this, plural generics can be used as simple generalizations based on sufficiently many object level verifications. The singular generic, on the other hand, can only be used in contexts where the taxonomy in which the kind term belongs is salient. This is what is at the root of the intuition that singular generics are less productive than plural generics.

## V. Conclusion

To conclude, then, I have tried to establish that cross-linguistically there is great uniformity in the semantics of true kind denoting NPs. In a language which marks number morphologically, the singular kind does not have stage-level interpretations while the plural does. And the singular seems less productive than the plural. In establishing this uniformity I hope to have identified number marking as crucial in understanding the dichotomy in NP-based genericity, a problem that had remained intractable so far.

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