

## LICENSING BY MODIFICATION

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**Abstract:** This paper looks at the phenomena of licensing by modification, whereby an unacceptable noun phrase is redeemed by the presence of a modifier or an unavailable reading for a noun phrase is made available with the addition of a modifier. It argues that an optimal account of such phenomena should derive these effects from the interaction of the meanings of individual expressions in the sentence rather than by positing a formal licensing relation between the modifier and the noun it modifies. The general approach is explicated by considering the distribution of bare plurals in Italian and the availability of generic readings for plural definites in English. The overall goal is a modest one. It seeks to draw attention to properties of modification that go beyond set intersection by focusing on phenomena that have not so far been closely scrutinized in the literature. It uses the particular results to draw some conclusions about questions of general interest.

### 1. Modification and direction of licensing

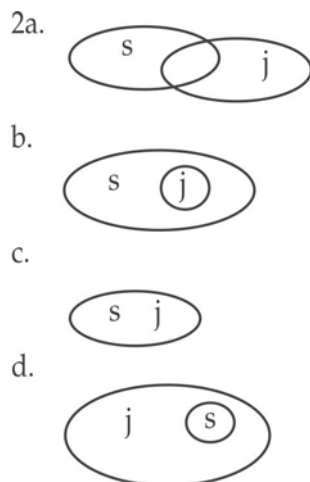
A good starting point for the semantics of modification is to consider its contribution to the denotation of the noun phrase that hosts it. In the sentences in (1), for example, we can take the intersective adjective *Japanese*, the relative clause *who is from Japan* and the common

Ilha do Desterro	Florianópolis	nº 47	p.217- 238	jul./dez. 2004
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noun *student* to denote sets of individuals. All of them being of the same type, modification can be treated simply as set intersection and interpretation can proceed compositionally. The definite determiner that combines with the modified nominal requires that the intersection of the two sets include a unique entity:

- 1
  - a. The student who is from Japan.
  - b. The Japanese student.
  - c. The  $(\text{student} \cap \text{Japanese/from-Japan}) = \iota x [\text{Japanese/from-Japan}(x) \ \& \ \text{student}(x)]$

While this approach accurately captures the truth conditional aspects of the meaning of modification, it leaves unaddressed its pragmatics. Consider the following relations between the sets *s* and *j* (*s* for student, *j* for Japanese/who is from Japan) where the intersection includes just a single individual with both properties. (1a) and (1b) would be semantically well-defined in all these situations, but in point of fact they are only judged felicitous in contexts like (2a) and (2b) where modification helps pick out a proper subset of the set denoted by the noun it modifies:



In situations like (2c) and (2d), where the head noun denotes the same set as the modifier or a subset of the set denoted by the modifier, modification appears infelicitous (see Partee, 1975). Of course, this infelicity may be affected by the potential for adjectival modification to be interpreted as a (phrasal) compound or by intonational stress on the head noun. As evidence of the first, phrases like *the French chef* or *the graduate student* do not necessarily require there to be chefs that are not French or students that are not graduate students. Note, of course, that these are also cases where the modifier has a non-intersective interpretation. To see the effects of intonation, *the Japanese STUDENT* carries the implicature that there are Japanese people who are not students. That is, it would be compatible with a situation like (2d) but not (2b). Intonational focus, in effect, shifts the implicature about a proper subset from the head to the modifier rather than doing away with the implicature itself.

Treating noun modifiers as functions to subsets of sets denoted by the noun seems, then, a reasonable way of characterizing their semantic role. This paper, however, looks at some cases where modifiers seem to do more than that, apparently licensing structures that would otherwise be ungrammatical, or unacceptable under a particular reading. Although such cases have been documented in the literature, they have not been subjected to systematic inquiry. The goal of the present paper is to bring together some cases of licensing by modification and look for explanations for them that make crucial use of the semantics of modification.

Let me begin by setting out the data, which come from English and Italian. Consider first the case of English *any*, an item that occurs in negative and other downward entailing contexts or in modal and generic contexts. As noted originally by Legrand (1975) and discussed more recently in Dayal (1995a) and (1998), *any* becomes acceptable in non-modal, non-negative contexts if modified by a relative clause, a prepositional phrase or an adverbial phrase. This phenomenon, which goes by the name of *subtriggering*, is shown in the data below. Note the contrast between (3a) and (3b)-(3d):

- 3a.\* Any student signed the petition.  
 b. Any student who went to the meeting signed the petition.  
 c. Any student at the meeting signed the petition.  
 d. Any student there signed the petition.

In normal cases of formal licensing we expect the licensor to take scope over the licensee. In the case of licensing by negation, for example, *any* in subject position cannot be licensed by sentential negation because the subject position in English is thought to be higher than negation. Thus (4a) is unacceptable but (4b) is grammatical:

- 4a. \*Any student didn't sign the petition.  
 b. The students didn't sign any petition.

If subtriggering involves formal licensing, it turns the notion of licensing on its head.

So-called exceptional licensing properties of modifiers have also been noted in Italian. As is well-known, Italian bare plurals are not acceptable in subject position. This is attributed by Longobardi (1994) and (2000) to the presence of a null existential determiner, which needs to be governed by the verb in order to be licensed. As noted in Longobardi (2000), however, the presence of a modifier can override the ban on bare plurals in subject position. This is shown by the contrast between (5b) and (6):

- 5a. Leo ha mangiato patate.  
 Leo PAST ate potatoes  
 b. \*Studenti hanno telefonato  
*Students have telephoned.*
6. Studenti che volevano sapere la data dell'esame hanno telefonato  
*Students who want to find out the date of the exam have telephoned*

Once again, we would have to say that licensing by modification goes in the opposite direction from licensing by verbal elements.

Elsewhere, a modifier facilitates an otherwise unacceptable reading. Consider the following sentences in English, which have a plural definite in them:<sup>1</sup>

- 7a. The students are successful.
- b. The students like school.

The sentences above are grammatical but lack a generic reading. The definite must be interpreted as referring to particular individuals in the context. This situation, however, can be changed by adding appropriate relative clauses:

- 8a. The students who work hard are successful.
- b. The students who are smart like school.

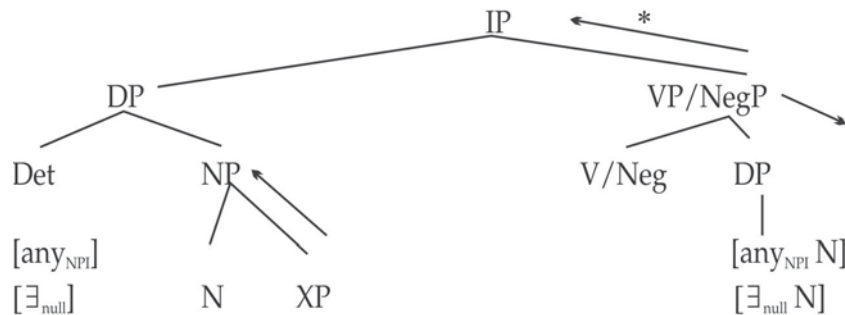
Modifiers can also make otherwise unavailable generic readings available in Italian. Consider the following, where (9a) is from Chierchia (1998) and (9b) is based on examples from Longobardi (2000):

- 9a. \*Leo odia gatti.  
*Leo hates cats.*
- b. Leo odia gatti di grandi dimensioni  
*Leo hates cats of large size.*

The aspectual specification on the predicate *hate* in (9) imposes a generic reading on the bare plural. The data shows that this is not available without modification. Generic readings for nominals are often thought to be associated with a position at LF that is high in the tree (Diesing 1992, for example). It might be possible under that assumption to subsume the role of modification in making available generic readings with the cases discussed earlier.<sup>2</sup>

It is clear from the data presented here that noun modifiers have an effect on the possibility of having items that appear to be otherwise restricted. Such apparent cases of licensing, however, differ crucially from canonical forms of licensing in that the licensor is c-commanded by the licensee rather than the other way around. Granting special licensing properties to modifiers therefore raises the question of the principles behind such a reversal:

10.



In this paper I will suggest that the effects seen here are not instances of formal licensing of special elements but a result of the interaction between the semantics of modification, the host NP and other elements of the structure. We will begin our exploration by reviewing the explanation for subtriggered *any* in Dayal (1998), which also represents an approach where the apparent licensing effect of modification on *any* is derived from the semantics of the various elements involved. I will then explore the possibility of a similar approach to the other cases mentioned here.

## 2. The phrasal nature of licensors

### 2.1. Modification and English *any*

In analyzing the role of modification in licensing English *any* (Dayal, 1995a, 1998), I drew attention to the need to go beyond the semantics and pragmatics of intersective modification summarized in

section 1. There are cases where adjectival and phrasal modification are syntactically available and the two can be considered truth-conditionally and, possibly, pragmatically at par. But insofar as their so-called licensing potential is concerned, adjectival and phrasal modification do not behave similarly. I noted contrasts like the following to draw the distinction:<sup>3</sup>

- 11a. \*Mary talked to any angry student.  
 b. Mary talked to any student who was angry.

Although the distinctions are somewhat subtle, they are robust. The conclusion I reached was that prenominal modifiers are not sufficient for licensing *any*, while postnominal modifiers generally are. The crucial difference between them is that postnominal modifiers, which are phrasal according to Sadler and Arnold (1994), introduce an independent spatio-temporal variable. That is, the grammaticality of (11b) is dependent upon the possibility of having a set of students who are angry at a particular time and place. This temporal interpretation is not really available with a prenominal modifier.<sup>4</sup>

Tying up the phrasal character of postnominal modifiers with the possibility of a temporal interpretation allowed me to explain the subtriggering effect. Briefly, *any* is taken to be a universal quantifier over situations and individuals, a universal over possible individuals if you will.<sup>5</sup> A sentence like (11a) is unacceptable because there is a clash between the presupposition that the domain of quantification ranges over possible individuals and a predication that can only apply to actual individuals. This is shown in (12a). Sentence (11b), however, avoids this by restricting the domain of quantification to those possible individuals who also fulfill the property in the relative clause, including the property of being in the temporal slice denoted by the temporal specification of the relative clause. This is shown in (12b):

- 12a.  $\forall s, x$  [student ( $x, s$ ) & angry ( $x, s$ ) & C( $s$ )]  $\forall s'$  [ $s < s'$  & talk( $m, x, s'$ )]

- b.  $\forall s, x$  [student(x,s) & C(s) &  $\forall s''$ [s<s'' & P(s'') & angry(x,s'')]]  
 $\forall s'$ [s<s' & talk(m,x,s')]

The issue whether subtriggered *any*, or more generally FC *any*, is a universal or not continues to be debated (Giannakidou, 2001; and Saeboe, 2001; to name two recent works). Without going into the details of that discussion, let me note that subtriggering remains a challenge for alternative ways of conceptualizing the meaning of *any*. What is of importance to us here is the fact that the apparent licensing effect of modification is derivative on independent pieces of the meaning. In the next sections we will assess whether it is also possible to derive the other cases of licensing noted in section 1 in a similar manner.

## 2.2. Italian bare plurals

Let us look now at the case of Italian bare plurals to see if the analysis for *any* can be used to explain licensing effects here. Longobardi takes Italian bare plurals to contain a null determiner that needs to be properly governed. Bare plurals that occur in the scope of the verb at LF satisfy the requirement of proper government, those that do not must satisfy this requirement in some other way. Modification is claimed to be one of the other ways of meeting this requirement. As we have seen, this begs the question of how a modifier could do this, the principles behind the claimed licensing not being self-evident.

I suggest instead that the crucial factor in the licensing of Italian bare plurals, just as in the case of subtriggered *any*, is the independent situation variable provided by a phrasal modifier. Let us assume that Italian bare plurals lack the situation variable that all noun phrases must have in addition to a referential index.

- 13a. [<sub>IP</sub> Leo [<sub>VP</sub> ha mangiato<sub>s-i</sub> [patate<sub>[i]</sub>]]  
 b. [<sub>IP</sub> studenti<sub>[?]</sub> [<sub>VP</sub> ha telefonato]]



- c.  $[_{IP} [studenti_{[i]} [che\ volevano\ sapere\ la\ data\ dell'esame]_{[i]}] [_{VP}\ ha\ telefonato]]$
- 14a.  $[_{IP} [gatti_{[?]}]_{[i]} [Leo\ [_{VP}\ odia\ t_j]]]$   
 c.  $[_{IP} [gatti_{[i]} [di\ grandi\ dimensioni]_{[i]}]_{[i]} [Leo\ odia\ t_j]]$

Consider first the subject object asymmetry shown in (13). We represent the missing temporal index on the common noun in subscripted square brackets. In (13a) the bare plural inherits the temporal specification of the *c*-commanding verb but in (13b) it is unable to do so since it is not in the scope of the verb. A phrasal modifier brings with it such specification and the bare plural being in the same extended projection shares that specification. The case of generic readings is a straightforward extension of this idea. The lexical and aspectual properties of the verb force the direct object in (14a) to move to a position from where it can be mapped to the restrictor. In this position, however, the bare plural cannot inherit the specification of the verb, which is now lower in the tree. Instead, it must rely on a modifier whose situation variable it can share to provide the requisite specification.

Before concluding this section, let me briefly address two questions that this approach raises. Given the reliance on the introduction of a situation variable, one might expect that adjectival modification would not have the same effect as relative clause or PP modification. Interestingly, even though Longobardi (2000) includes adjectives in the list of licensors, he does not give any examples with adjectives to show their effect. Chierchia (1998), in talking of the factors that can redeem generic bare plurals, notes that simple modification is not sufficient and gives two question marks to (15):<sup>6</sup>

15. ?? Leo odia gatti neri  
 "Leo hates black cats."

I therefore conclude that, just as in the case of English *any*, only phrasal modifiers provide the necessary situation variable that is crucial to the so-called licensing of the Italian bare plural.

The second question that arises in this connection is why the English bare plural is exempt from a similar requirement. The counterparts of the unacceptable Italian sentences are all fully acceptable in English. I will assume here the suggestion in Longobardi that the crucial difference is that English bare plurals are kind terms while Italian bare plurals are not. If we treat English bare plurals as kind terms rather than indefinites, they can denote functions from situations to the maximal entities that instantiate the kind in that situation:

$\ddot{e}s$  [ $\acute{e}x P_s(x)$ ] (see Carlson, 1977; Chierchia, 1998; Dayal, 2004; and Dayal, forthcoming; among others). Since they come with their own situation variable, they are not dependent on other elements for it. The behavior of Italian bare plurals, we have seen, can be explained if we take them to be deficient in this respect.

### 2.3. *The English definite plural*

Let us turn now to the case of English plural definites which generally do not allow for a generic interpretation. This can be attributed to the familiarity requirement associated with the English definite:<sup>7</sup>

- 16a. The students work hard.  
 b. Gen  $s, x$  [students-in- $s(x)$  &  $x = ?$ ] [are-successful-in- $s(x)$ ]

In the above, the underlined condition is meant to capture the familiarity requirement, along the lines of Kamp and Reyle (1993). The variable introduced by the definite must be identified with a variable in the superordinate DRS resulting in reference, in this case, to some entity in the world of evaluation.

If we say that the absence of generic readings is due to the familiarity requirement on definites, the question we must address is why generic readings are not similarly ruled out once modification enters the picture. The presupposition that the students be anchored to some

salient entity in the context is clearly inert in (17). The underlined condition in (17b) would appear not to belong in the representation.<sup>8</sup>

- 17a. The students who work hard are successful.  
 b. Gen  $s, x$  [students-in- $s(x)$  & work-hard( $x$ ) &  $x = ?$ ] [are-successful-in- $s(x)$ ]

Before we proceed any further it might be worth noting that the generic reading of the definite plural is only possible when the aspectual specification on the matrix *and* the relative clause both allow for generic interpretation. Thus the sentences in (18) lack generic readings. In this respect, the case of the plural definite is different from subtriggered *any* where any kind of relative clause or phrasal modifier has the relevant licensing effect:

- 18a. The students who are working hard are successful.  
 b. The students in the room are successful.  
 c. The students there are successful.

Continuing the line of argument used to explain the licensing by modification of Italian bare plurals, I will suggest that the head noun in English definites also has the option of sharing the situation index of its phrasal modifier. Under this view, the example in (17a) would have the following logical representation, where I use subscripted square brackets to indicate the inherited situation variable:

- 19a. [[the students<sub>[ij]</sub> [who work hard<sub>i</sub>]] are successful]  
 b. Gen  $s, x$  [students-in- $s(x)$  & work-hard-in- $s(x)$ ]  $\exists s'$  [ $s < s'$  & successful-in- $s'(x)$ ]

In (19b) what we see essentially is the possibility of the generic operator binding the situation variable introduced by the modifier going hand-in-hand with the absence of the familiarity requirement. The

fact that a modifier with an episodic interpretation does not yield the same result is not surprising. It follows straightforwardly from the role of aspect in facilitating such binding.

While this approach may capture the intuitive truth conditions associated with sentences with definite plurals, it totally ignores the semantics of the definite determiner, in effect treating it as an expletive. It would be desirable to retain the standard semantics associated with the definite determiner and still achieve the results we want. I will suggest that if we take the role of aspect within the modifier seriously, we can do precisely that.

Note that the given sentence should have a complex quantificational structure. One such structure is induced by the aspectual specification on the matrix verb, Operator-1, Restrictor-1, Nuclear Scope-1 in the schema shown in (20a); the other is induced by the aspectual specification on the relative clause, Operator-2, Restrictor-2, Nuclear Scope-2 in the schema in (20a):

- 20a. Operator-1 [<sub>Restrictor-1</sub> **Operator-2** [<sub>Restrictor-2</sub> ] [<sub>NS-2</sub> ] ] [<sub>NS-1</sub> ]
- b. Gen s [C(s) & Gen s' ∃y [students-in-s'(y) & work-hard-in-s'(y) & y = ?] [s < s']  
[successful-in-s(x)]
- c. Gen s x [C(s) & *students-in-s(x)* &  
Gen s' ∃y [students-in-s'(y) & work-hard-in-s'(y) & y = x] [s < s']  
[successful-in-s(x)]

The key idea is the following. We can assume, as before, that a definite noun phrase has the option of sharing the situation index of its modifier. What this amounts to is the fact that it can be interpreted inside the restrictor associated with the relative clause, as shown in (20b). However, we assume, as is standard, that a definite noun phrase cannot introduce a variable but must presuppose it. In the given structure the presupposition of existence is met by accommodating a discourse referent in the immediately superordinate context, as shown in (20c) and what we end up with is something equivalent to a normal generic sentence. It goes without saying that when the modifier sim-

ply provides a situation variable but not the embedded layer of quantification, as in (18), the presupposition of existence will force accommodation to happen outside the matrix quantificational structure. That is, the possibility of a generic reading for the definite will be lost. It is the same with prepositional and adverbial modification, which do not induce box splitting. We see, then, that the apparent licensing effect of modification on generic readings of plural definites is a result of the aspectual semantics of modification and the semantics of definiteness.

### **3. Some implications**

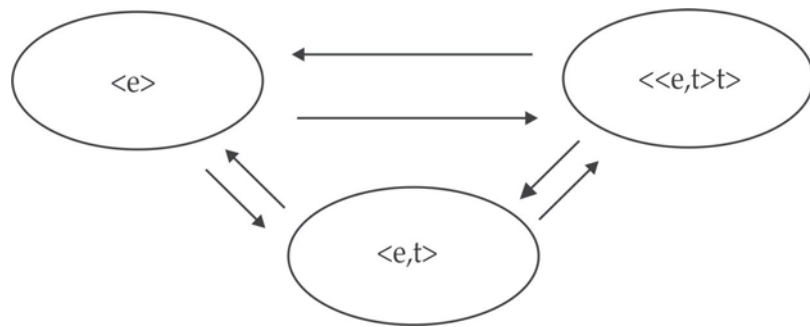
#### *3.1. Null determiners*

In the previous section I proposed accounts for two so-called cases of licensing by modification. In both accounts, the desired results were derived from the semantics of the parts, obviating the need for a radical shift in the role of directionality in licensing. I would like to end this paper by discussing some general implications of the accounts proposed.

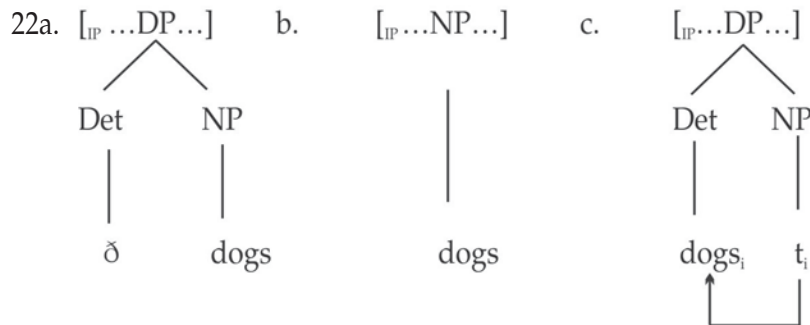
Let me begin with the analysis of Italian bare plurals sketched out in section 2.2, which is in many ways compatible with the ideas presented in Longobardi (1994, 2000) and Chierchia (1998). However, it differs crucially from them in not using the presence of a null determiner in order to account for the observed subject-object asymmetry in distribution. Instead it taps into the possibility of a missing situation variable, and the need for a c-commanding verb to provide this variable. As far as the basic distribution goes, the two accounts are equivalent but, as I have shown, the advantage in tapping into the situation variable of the bare plural is that it can also be used to explain the role of the phrasal modifier in making subject bare plurals acceptable. Since an alternative to null determiners is available for the basic as well as the more complex case, one might well ask whether there remains any motivation for positing null determiners in Italian and perhaps, more generally, anywhere in natural language.

Let us consider the role of null determiners in the semantics of noun phrases, by referring to the theory of type-shifts argued for in Partee (1987):

21.



We can follow the standard view that common nouns denote in the  $\langle e, t \rangle$  domain, with lexical determiners encoding type shift operations required to turn them into the argumental types  $\langle e \rangle$  or  $\langle \langle e, t \rangle t \rangle$ . In the DP analysis of noun phrases, this amounts to saying that NP's are of type  $\langle e, t \rangle$ , DP's of type  $\langle e \rangle$  or  $\langle \langle e, t \rangle t \rangle$ , with determiners facilitating the requisite shift. The syntax-semantics map is less clear in the case of bare nominals (see Dayal, 2004, for discussion). Three possibilities that have been argued for are represented schematically below:



The option in (22a) takes there to be a null determiner, the one in (22b) assumes covert type-shift, while the option in (22c) assumes N'!D raising. The first option has been argued for by Longobardi (1994), as discussed here, on the basis of the restricted distribution of Italian bare plurals. It would be quite plausible, however, to posit a structure like (22b) for bare nominals in languages that freely allow them, as has been done by Carlson (1977) and Chierchia (1998). Longobardi, however, claims that noun phrases universally must be DP's and the reason some languages do not show syntactic restrictions is due to the fact that they have structures like (22c). Here the DP has neither an overt nor a null determiner so distributional restrictions do not apply.

This view has been quite influential in explanations of other apparent subject-object asymmetries. In languages without definite or indefinite determiners, for example, it has sometimes been noted that definite (and generic) readings are always available but indefinite readings are only available in object position. A null indefinite determiner is claimed to be responsible for the asymmetry while the possibility of N→D raising is understood as the source of unrestricted definite and generic reading (see Li 1997, for example).

In point of fact, this line of approach does not actually derive the pattern of readings it sets out to derive, a point I discuss in some detail in Dayal (2004 and forthcoming). I argue there for an enhanced theory of type-shifts and reference to kinds to account for the pattern of definite and indefinite readings in bare nominal languages. I will not go into those arguments here but simply note that in the absence of an alternative account for the distributional restrictions observed in Italian, the presence of null determiners could not be dispensed with in that paper. The current account, by providing such an alternative, reopens the question of the proper syntactic analysis of bare nominals, shifting the burden of proof to those who would argue for the existence of null determiners in natural language.

### 3.2. *Definiteness and variability*

I now turn to drawing out the implications of the analysis of English plural definites and genericity. A standard diagnostic since Kamp (1981) and Heim (1982), for determining whether a particular expression is a definite or an indefinite has been to test for binding by covert generic operators or adverbs of quantification. This is understandable since normal (unmodified) definites resist quantificational binding and while normal indefinites are open to it. This diagnostic was used by Berman (1991), for example, to argue that *wh* expressions in free relatives and embedded questions are essentially indefinites. More recently, Wiltschko (1999) has argued for the same position. At the same time strong evidence has been presented in Jacobson (1995), Dayal (1995b) and (1997) that shows free relatives to be definites.

I had pointed out in Dayal (1995b) that the diagnostic used by Berman rests on the false premise that definites cannot have generic readings. What remained to be clarified, of course, was why a similar resistance was not observed in free relatives, which seem to lend themselves quite readily to generic interpretations:

- 23a. Mary usually likes what Bill cooks.  
 b. #What Sue is cooking is often tasty.

The first thing to note in this connection, of course, is the dependence of this reading on the aspectual specification in the free relative, as shown by the contrast between (23a) and (23b). Recall that plural definites differ from subtriggered *any* in also requiring aspect to support a generic interpretation of the noun phrase. Now, the interesting point here is that free relatives are, by definition, phrasal. As such, there is never a problem with creating the second or embedded layer of quantification that we saw was important in diffusing the presupposition of existence associated with definites. I therefore suggest that this is the source of the propensity for generic reading that free relatives display. We have seen in section 2.3 that the familiarity requirement of canoni-



cal definites can also be rendered harmless when phrasal modifiers admit a generic interpretation. The moral of the story, therefore, is to refine the diagnostic of generic interpretations so that presence or absence of generic readings are only relevant when the definite at issue does not have a modifier whose situation index can be bound.

#### 4. Conclusion

In concluding this paper, I would also like to note two other phenomena where modification seems to have a licensing effect. Although I do not have a solution for them at this time, I believe the problems are interesting enough in their own right and show the need for further work on the topic of modification and licensing.

In addition to bare plurals, Italian also has what is known as the bare partitive construction. Bare partitives are generally thought to be indefinites, and as such, expected to be subject to binding by generic operators. Chierchia (1997), for example, argues for this on the basis of (24a). However, this effect is lost when the modifier is not present. Example (24b) does not have a generic interpretation (Gennaro Chierchia, personal communication). The available indefinite reading only admits an implausible stage-level interpretation for predicate *be blond*:

- 24a. degli Italiani del sud raramente sono biondi  
of-the Italians from the south rarely are blond  
*Italians from the south are rarely blond.*
- b. # degli Italiani raramente sono biondi  
of-the Italians rarely are blond  
*Some Italians are rarely blond.*

Note that here we cannot appeal to a missing situation variable as we had done in the case of bare plurals since bare partitives do not display any subject-object asymmetries in the basic cases.

Bare partitives, then, pose a puzzle. They are not acceptable in generic statements without modification but are not otherwise restricted in distribution. What may be worth probing here is the relationship of the bare partitive and the plural definite. In their unmodified forms, the two are in complementary distribution. Plural definites may occur in the restrictor of generic statements but not in the nuclear scope; bare partitives can occur in the nuclear scope but not in the restrictor.<sup>9</sup> An account in terms of economy suggests itself but I leave this for future research.

Another phenomenon where modification by licensing needs to be further investigated occurs with *some* indefinites in English, which are thought not to lend themselves to generic interpretations. As noted by Carlson (1981), this is only true when they are not modified. The relevant contrast is shown in (25a)-(25b). What makes the paradigm particularly interesting, however, is that this so-called licensing is dependent not just on the presence of an appropriate modifier but also on the absence of a full nominal head. Sentence (25c), where *some* combines with a semantically contentful nominal *patient* does not yield the requisite generic reading:

- 21a. Someone should have a cup of tea.
- b. Someone who has a headache should have a cup of tea.
- c. Some patient who has a headache should have a cup of tea.

Although I do not present an explanation for this phenomenon, I hope that the puzzle it poses, along with the other issues discussed here, sparks further interest in the topic of licensing by modification.

### Notes

1. I use plural definites rather than singular definites to make the case since singular definites lend themselves to a kind interpretation quite readily while plural definites do not. See Dayal (2004) for a recent account of singular and plural kinds.

2. Consider the following paradigm, where the singular indefinite *a* in (i) does not yield a generic reading. The addition of an adverbial phrase in (ii) facilitates the relevant reading, but not the noun modifier in (iii). I do not consider such cases here since they seem to differ in crucial ways from the focus of the present study. For one thing, there seems to be a singular-plural distinction at work, as shown by the contrast between (i) and (iv), the latter being acceptable as a habitual statement. For another, licensing does not occur from within the nominal in these cases:
  - i. John smokes a cigar.
  - ii. John smokes a cigar after dinner.
  - iii. John smokes a cigar from Cuba.
  - iv. John smokes cigars.
3. Note that it is possible to make (11a) acceptable with focus on the adjective: *Mary talked to any ANGRY student*. Crucially, though, this has a metalinguistic quality. It seems to be a response to: *Did Mary talk to ANY student?*
4. In those cases where people seem to accept *any* on the basis of prenominal adjectives, they inevitably add a covert postnominal modifier: *Mary talked to any angry student there*. See Dayal (1998) for further discussion.
5. The original idea of noun phrases having their own temporal index comes from Eng (1986). The idea that the situation variable of an *any*-phrase is universally bound can be seen as a generalization of that idea.
6. There are other factors that improve the status of bare plurals, such as coordination and focus, which I do not discuss here.
7. Of course, this is not the case in all languages. The Romance languages, for example, readily allow plural definites to have generic readings. See Dayal (2004) and (forthcoming) as well as Robinson (2005) for discussion.
8. In fact, the generalization that definites always have a familiarity requirement that enforces reference to contextually salient groups is open to other qualifications. Thus, intonational focus on the adjective has the effect of allowing something akin to the generic reading (i)-(ii). In fact, intonational focus makes it possible for even unmodified definites to have a reading where no particular group is picked out (iv):
  - i. The SMART students are always successful.
  - ii. The HARDWORKING people rarely get any appreciation.
  - iii. The STUDENTS always know what is going on.

These are cases, I believe, where the functional reading of definites comes into play. Focus brings with it an existential presupposition about the superset (Rooth, 1985). The function takes us from particular situations to subsets satisfying the definite description. Familiarity, one might say, is satisfied at the level of functions, not entities. I do not discuss this further in this paper.

9. A plural definite can, of course, occur in the nuclear scope but its interpretation there would be that of a normal definite. See Dayal (2004, and forthcoming) and Robinson (2005) for discussion.

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