

**A Note on Belladonnas**  
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In Carlson (1977, 1980), an analysis of English bare plurals (such as "dogs", "rusty nails", etc.) is presented, which subsumes both major interpretations of the bare plural--the quasi-universal or "generic", reading and the existential reading--under a constant interpretation of the NP. In this analysis, the NP under any circumstances is a rigid designator denoting a kind of thing, not too unlike a proper name, which interacts with the semantic interpretation of the rest of the sentence in such a way as to yield the generic and the existential interpretations. Thus, the proposal is that there is a unified analysis of bare plurals. The general intention of the analysis is that it should also be extended to determinerless mass terms, like "sand" or "lumpy gravy".

Since these proposals were made, another type of unified analysis of bare plurals has emerged without much fanfare, within the context of the theory of indefiniteness implemented broadly within a DRT framework. In this analysis, bare plurals are treated as garden variety indefinites, contributing a predicate to the semantics and a discourse marker which in some cases is bound by existential closure, yielding the existential reading, and in other cases bound by a generic operator or adverb of quantification, yielding the "generic" reading. This approach is very appealing since it fits in very neatly with the aims of the theory of indefiniteness, and more generally the DRT framework. The approach also has the possible advantage of not needing to posit "stages" as required by the earlier proposal, and so, being neater and fitting into a framework nicely, is presently and understandably the favored approach.

The natural DRT approach, however, leaves three main issues unaddressed that were of central concern in motivating the kinds analysis. One is that the treatment of so-called "kind" level predicates such as "be widespread" or "be a species of insect" remains unworked-out. Another is the semantic parallelisms between bare plurals and denoting phrases like "this species of plant", or the generic reading of "the lion", remain likewise unclearly formulated. The last, which will detain us some here, is that the DRT analysis treats bare plurals and their indefinite singular counterparts ("lions"/"a lion") as parallel constructions up to the level of plurality. Thus, the treatment sets aside some arguments presented earlier that bare plurals have scoping possibilities that are different from indefinite singulars. An evaluation of the significance of these facts--assuming they are facts--remains in abeyance in the popular and elegant DRT-style approach.

One point I wish to emphasize is that, while I have opposed the two approaches, it is in principle quite possible to incorporate the "kinds" analysis into a DRT framework, perhaps quite easily; so the opposition I have outlined is one of analyses, not frameworks.

One primary argument used in support of the notion that bare plurals and indefinite singulars differ is the observation that bare plurals, including their existential readings, do not seem to scope out of intensional contexts. Thus, while (1) appears ambiguous between a wide- and a narrow-scope reading,

1) John is seeking a unicorn.

(2) appears unambiguous:

2) John is seeking unicorns.

(2) appears only to have the narrow-scope reading, so the claim is that a continuation of (1), as in (1'), makes sense,

1') John is seeking a unicorn. It is somewhere in the garden.

whereas a parallel continuation of (2), as in (2'), does not:

2') John is seeking unicorns. They are in the garden.

if 'they' in (2') is to be understood as meaning, the unicorns that John is seeking (which requires a de re reading). The "kinds" analysis, however, does seem to correctly predict that there is a sensible reading of (2') in which "they" refers to the kind "unicorns", and as such is adequately paraphrased by (2'') in terms of getting the correct truth-conditions:

2'') John is seeking unicorns. Unicorns are in the garden.

(2'') and (2') differ, however, in that the pronoun functions as a definite, whereas "unicorns" functions as an indefinite, and so have differing discourse functions. These particular facts correspond to my present and (more importantly) past intuitions, and seem to remain generally undisputed. The kinds analysis predicts this pattern of facts since the existential import of "unicorns" is not associated with any determiner, but rather arises from an existential quantifier associated with the lexical decomposition of the verb "seek", which is a part of the intensional context it induces. It bears emphasis that (2) does in fact have a de re reading, where the kind "unicorns" and not a particular group of them is the res, unlike the de re reading of (1) where an individual unicorn being sought constitutes the res.

In Krifka et al (1995) an argument is presented that the existential reading of bare plurals needs to be assigned scope with respect to other sentence operators. If this argument in favor of scoped readings goes through, it poses a challenge to the scopeless analysis of existential readings of bare plurals.

The argument goes like this. Consider sentence (3):

3) John intentionally put belladonnas in the fruit salad, because he mistook them for cherries.

This English example is a translation of a German example from Kratzer (1980). On first sight, it would appear that an analysis such as (4) is necessary, with a single wide-scope existential quantifier binding all instances of X:

4)  $\exists X$ [belladonnas(X) & John intentionally [put X in the fruit salad]] because he mistook X for cherries]]

(There is also a possible reading on which the 'because' clause is within the scope of 'intentionally', which we set aside; and neither clause should be interpreted generically). Here we take the variable 'X' to range over pluralities of entities. The analysis of (4) makes the following claims about a meaning of (3). First, that John did not intend to put belladonnas (being poisonous) into the fruit salad. Rather, John's intentions were to put those objects whose collection serves as the satisfying value of 'X' into the fruit salad. Thus, the argument of the VP adverb 'intentionally' is the intension assigned to the verb phrase 'put X in the fruit salad'.

But, as noted above, the fact that we can get de dicto/de re types of ambiguities does not in and of itself distinguish the two analyses under consideration, though they are of different types, a matter we will return to briefly later. The real issue is whether an existential quantifier associated with the bare plural plural is scoped. The interpretation of the pronoun 'them' in the 'because' clause bears directly on this issue. Note that the pronoun is not replaceable by a second instance of the NP 'belladonnas' preserving meaning. (5).

5) John intentionally put belladonnas in the fruit salad because he mistook belladonnas for cherries.

does not mean the same as (3).

Now, (5) is in fact a not only possible but natural reading of (3). It is compatible with a situation where, for instance, John sees a large bowl of belladonnas, takes them to be cherries, and then puts some but not all of them into the fruit salad. However, on the reading of interest, (5) differs from (3) since in (3) but not (5), John's error is, necessarily, the result of mistaking for cherries all the very same belladonnas that he put into the fruit salad. However, the kinds analysis would indifferently analyze both (3) and (5) roughly as (6),

6) John intentionally [ $\exists$ X [ belladonnas (X) & John put X in the fruit salad]  
because [  $\exists$ Y [belladonnas (Y) & John mistook Y for cherries]]]

predicting that (3) and (5) are synonymous. Since the existential quantifier in the scope of "intentionally" cannot be given wide scope on the earlier kinds analysis, there is no way to construct a representation anything like that of (4), and since we need something like (4), the kinds analysis is incorrect. That's the argument.

I wish to suggest that this conclusion is overdrawn. First, a word about intuitions. I must confess that when the example was first presented (in English) at a conference, I quite honestly was struck by the sense that the reading claimed to be present was in fact missing, to the point I misunderstood what the argument was. However, since, in thinking about it and talking with various other people, I have found that many, myself included, have an "iffy" sense about the reading, an intuition I wish to take seriously. Furthermore, Kratzer and others clearly feel that such a reading is possible, which still demands some account.

Here's one problem, though. Both analyses would treat singular indefinites pretty much alike, particularly in assigning existential quantification with potential scoping properties to the NP (whether by the meaning of "a" or by existential closure). Note that examples like (7) exhibit a clear scope ambiguity:

7) Wendy intentionally threw a wallet containing her life's savings down a sewer.

(7) can be read as Wendy wishing to rid herself of her life savings, or as a very bad mistake, where for instance she is vengefully throwing her ex-husband's wallet into the sewer, entirely unaware of its contents.

Note that with such examples, a 'because' clause containing a coreferential pronoun does not disambiguate. (8) very clearly has a reading where Wendy wishes to rid herself of her life's savings, and is not making any mistake:

8) Wendy intentionally threw a wallet containing her life's savings down a sewer, because she knew her ex-husband would climb in after it.

In this case, the de dicto reading is the favored reading, since it seems to better explain the situation, but the de re reading is also possible (where, for instance, Wendy knows nothing about the contents of the wallet, or even that it is a wallet at all). Since both approaches would treat the indefinite singular on its intensional reading as having scope only within the scope of "intentionally", both would also predict that the interpretation we find (8) to have should be impossible. Yet, it does seem possible.

That's one problem. A second problem is that intensional readings of examples like (3) and (8) do not seem possible with all intensionalizing operators. It appears that there is a contrast between the examples of (3) and (8) on the one hand, and (9) and (10) on the other:

9) John apparently put belladonnas in the fruit salad, because he mistook them for cherries.

10) John allegedly put belladonnas in the fruit salad, because he mistook them for cherries.

In these cases, there is a strong temptation to read the "because" clause as within the scope of the adverbs, so to make the distinction clearer, let's contrast (11) and (12) with the 'because' clause preposed to disfavor that reading:

11) Because he mistook them for cherries, John intentionally/willingly put belladonnas in the fruit salad.

12) Because he mistook them for cherries, John allegedly/apparently put belladonnas in the fruit salad.

(11) appears to have a reading regarding a specific collection of belladonnas, whereas the only reading of (12), I believe, is the one where there is no necessary token-identity of the items.

Unlike most intensionalizing operators, the adverb "intentionally", or one like "willingly", extensionally entails its complement. Thus, if Mary intentionally or willingly voted for Clinton, then she must have in fact voted for Clinton. However, other operators, such as 'allegedly' or 'apparently' have no such entailment, and I believe this is the critical difference.

Let's return briefly to the sort of de re reading the first clause of (3) has in isolation:

3') John intentionally put belladonnas in the fruit salad.

Intuitions are tough, but the kinds analysis claims that the res in such an example is the kind belladonnas, and not some specific collection of them, unlike the reading one gets with a determiner like 'a' or 'several'. In this regard, note that there is a very natural de re reading for examples like the following:

13) John intentionally put several belladonnas/a belladonna, and not several others/another one in the fruit salad.

However, the following has no parallel reading, and sounds funny:

13') ?John intentionally put belladonnas, and not (several/some) others, in the fruit salad.

The kinds analysis makes sense of this in that there is no specific de re collection of belladonnas to be a member or not be a member of for the bare plural case (13'). Note, the addition of a 'because' clause as in (3) does not make (13') sound good.

Now to conclude. I wish to claim that the token-identity reading of pronouns referring back to existential readings of bare plurals in intensional contexts like (3) depends on the existential entailment noted above, and not on an existential quantifier having any scope over an intensionalizing operator. If this claim is correct, it would explain the contrast between examples like (3) and (11), on the one hand, and (12), or (2) on the other. It would account for the possibility of indefinite singulars having intensional readings in examples like (8), it gets, I think, the correct de re interp[retation, and, further, it potentially offers some account of the "iffy" intuitions that I have found accompany judgments about the possibility of the reading of interest in (3).

While I have not provided a full analysis of the semantics of these constructions in this note, these arguments cast some doubt on the claim that (3) is a serious counterexample to the notion that existential readings of bare plural in English are scopeless, and in fact a scopeless analysis may even be preferable.

#### References

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