Carlson 1977: *Reference to Kinds in English*.

Available at the Semantics Archive: http://semanticsarchive.net/Archive/jk3NzRIY/

The Puzzle

•   B(are) P(lural)s in English can have both generic and existential readings

(1)   Curious people crowded around the site of the accident.
          (i.e., some curious people)

(2)   Curious people like to travel a lot.
          (all, or nearly all, curious people; curious people in general).

[examples from Carlson 1999]

[Irene: But given the diversity of readings that BPs can have (see previous handout) does it make sense to assume this split between existential and generic readings?

In class, we discussed the following as a potential test that would tease the two uses apart: On their existential reading, BPs can be replaced by **some NP** without a noticeable change of meaning; on their generic reading, they can't.

But what about the following example? (Danny): I am having brunch, and I see some Americans next to me eating blood sausage. Is it felicitous for me to say **Americans eat blood sausage (now)**? And isn't that sentence true just because some Americans eat blood sausage?

Here's what Carlson had to say about the distinction between generic and existential uses: "As we are assuming there to be an intuitive split between the generic and existential uses of the bare plural for the moment, a word is in order concerning the recognition of each. To a large extent, I will be relying upon the sympathy of the reader to make the distinction. However, I am in a position to offer some crude rules of thumb for distinguishing the two. It bears emphasis that this distinction is made at this time for investigative purposes only, and we leave open for now exactly what theoretical significance to attach to this split" (p. 55-56)

First rule of thumb: Substitution for a 'higher-order' bare plural works for existential uses of BPs, but not for generic uses.

(1)   Dogs are here
          _____
          Mammals are here

(2)   Dogs bark
          _____
NOT: Mammals bark.

Can you find counterexamples?

Second rule of thumb:

(3) Existential uses of BPs can be paraphrased by **some NP**; generic uses by **all NP** or **most NP**

We have already seen this doesn't work.

Let's wait until we have studied Carlson's proposal and then think whether the theoretical distinction he draws matches an intuitive distinction or not.]

•   Two questions:

(i)   What do BPs mean? Do they have a single meaning or are there two or more different meanings?

(ii)   How do we determine which interpretation(s) of BPs is/are appropriate?

        [note: the focus is only on BPs that are not in predicate nominal position]

The Initial Hypothesis: Two null quantifiers.

•   Bare Plurals in English are ambiguous.

•   The existential reading of BPs involve a null determiner, $\varnothing_\exists$, which is the plural form of the indefinite article **a(n)** (as assumed, e.g., in Chomsky 1965).

•   The generic reading of BPs involves a different null determiner (or, perhaps, several null determiners).

Demolishing the Initial Hypothesis   (Chapters 2 and 3)

•   Existential BPs are not the plural version of indefinite singular NPs. The two types of NPs differ in a way that cannot be attributed to number morphology.

•   Generic BPs cannot be given a quantificational analysis.

•   BPs are not ambiguous: they have a unified denotation. The different readings that we observe are the result of the interaction between this denotation and other elements in the sentence.

1.   Existential BPs are not the plural version of singular indefinites.

•   If $\varnothing_\exists$, is the plural form of **a**, we would expect that the two will share all relevant characteristics up to those that can be attributed to the presence or absence of plurality. This, however, is not the case.

•   Existential uses of BPs differ from indefinite singular in their scope possibilities.

(i) Cases where singular indefinites may have narrow or wide scope with respect to a given operator, where as BPs can only have narrow scope.

Transparent/Opaque ambiguities

        (3)   Miles wants to meet a policeman
                $\exists x$ (Policeman (x) & Miles wants (Miles meet x)) [TRANSPARENT]
                Miles want ($\exists x$ (Policeman (x) & Miles meet x) [OPAQUE]

        (4)   Miles wants to meet policemen
                only opaque reading (narrow scope configuration)

Note that plurality is not the culprit:

> (5)   Miles wants to meet some/all/twelve/many/most policeman

[Danny: are we sure that (4) involves an existential reading – after all, we could paraphrase this sentence as "Miles wants to meet policemen in general"? Benjamin: at any rate, the contrast between (3) and (4) shows that BPs don't have a reading that involves the plural version of **a**. But, then again, if no given sentence of the form BP+ VP is ambiguous (see 2.1. below), and if the BP in (4) is interpreted generically, then (4) may not be a good example. The examples below are probably more straightforward]

Negation

> (6)   A man is in this room and a man is not in this room
>   Contradictory reading: ¬ > ∃
>   Non-contradictory reading: ∃> ¬
>
> (7)   Men are in this room and men are not in this room
>   Only contradictory reading: ¬ > ∃

Plurality is not the issue:

> (8)   Some men are in this room and some men are not in this room

More examples:

> (9)   John didn't see a spot on the floor
>   ~> ∃
>   ∃> ~
>
> (10)   John didn't see spots on the floor
>   ~ > ∃

Every

> (11)   Everyone read a book on giraffes
>
> (12)   Everyone read books on giraffes

(ii)   Cases where the ∃ quantifier associated with the BP has <u>narrower scope </u>than the indefinite is capable of showing

> (13)   # A dog was everywhere
>   ∃x (dog' (x) & ∀p (place' (p) → at (x,p))
>
> (14)   Dogs were everywhere
>   ∀p (place' (p) → ∃x ((dog' (x) & at (x,p))

[Carlson also discusses differences between singular indefinites and BPs that have to do with pronominalization and deletion – I will skip those in the interest of time.]

• **Conclusion: $\varnothing_\exists$ cannot be regarded as the plural of <u>a</u>**

2.   Arguments for a unified analysis

2.1.   Non-ambiguity.

- If BPs were ambiguous, we would expect sentences of the form *Bare plural + VP* to be ambiguous between a generic and an existential reading. This does not seem to be the case.

- Only generic interpretation.

    (1)   Smokers are rude.
    (2)   Dogs are mammals.
    (3)   Books have between 100 and 150 pages.
    (4)   Dogs are collies.

- Only existential interpretation:

    (5)   John noticed plumbers in New York City.
    (6)   Firemen are available.

- (7) is not four ways ambiguous. The generic interpretation of the bare plural co-occurs with the habitual interpretation of the predicate and the existential interpretation of the bare plural co-occurs with the event interpretation of the predicate.

    (7)   Dinosaurs ate kelp.

- It is still possible to assume that the bare plural is ambiguous, and that the context selects one reading or the other. General non-ambiguity is not a sufficient reason to support a unified analysis, but it is a necessary component of the argument. More arguments for a unified analysis follow.

[In class, I mentioned a counterexample to the claim that sentences of the form *BP + VP* are never ambiguous:

(1)   I only excluded old ladies   (Longobardi 1994; (41a))

This can be understood as saying that I excluded only some older ladies (but admitted others), or as saying that excluded all old ladies.

You guys also brought up the famous

(2)   Typhoons arise in this part of the South Pacific

which we will talk about at length soon.

Let's go back to these examples after we have discussed Carlson's proposal]

2.2.   Anaphora

- "If the bare plural were truly ambiguous between a generic and an existential interpretation, we would not anticipate that the two could stand in antecedent-pronoun relation any more than any other pairs of arbitrarily chosen quantified NPs"

   (1)   <u>Several critics </u>left the movie even though <u>they</u> (≠ all critics) had a strong stomach

   (2)   <u>All critics </u> eat raw liver because they (≠ some critics) have strong stomachs

- But we find existential instances of bare plurals serving as antecedents of pronouns interpreted generically and vice versa

   (8)   May hates <u>racoons </u>because <u>they </u>stole her sweet corn.
                              GEN   ∃

   (9)   <u>Racoons </u>stole May's sweet corn, so she now hates <u>them</u>
                   ∃   GEN

[But don't (8) and (9) behave similarly to the following two examples, which contain two overt quantifiers?

(8')   Mary hates all raccoons, because they stole her sweet corn.
(9')   Some raccoons stole May's sweet corn, so she now hates them]

A variant of the anaphora argument, from Rooth 1985:

   (10)   At the post-WW III peace meeting, Martians presented themselves as almost extinct.
                                                       ∃   GEN

   (11)   *At the post-WW III peace meeting, some Martians presented themselves as almost extinct.
             (Rooth 1985)

And similar examples, from Krifka 2004

   (12)   At the meeting, Martians claimed [PRO to be almost extinct]
                                        ∃   GEN

   (13)   * At the meeting, some Martians claimed [PRO to be almost extinct]

[My notes here get messy, but I seem to remember that people liked the examples in (11) and (13)]

2.3.   Conjoined predicates (Schubert & Pelletier 1987 in support of Carlson's theory)

(14)   Snow is white and is falling through Alberta.
(15)   Dogs are noisy animals and are barking outside right now.

    (Schubert and Pelletier 1987)

[Sentences like (14) and (15) seem iffy. But we thought (15'), which makes the same point, was okay – (14) and (15) seem bad for independent reasons

(15')   Snakes are dangerous and are lurking in my yard.]

2.4.   "This kind of animal"

[we didn't talk about this]

*   "The NP 'this kind of animal also has 'generic uses' (…) and its existential and generic uses are distributed exactly in the same way as the corresponding uses of the bare plural"

(16)   Bill shot this kind of animal/bears yesterday   ∃
(17)   This kind of animal/dogs bark(s)   GEN
(18)   This kind of animal is/dogs are common   GEN

*   In the case of 'this kind of NP' we cannot appeal to an ambiguous null determiner. The only quantifier that is allowed after **of** is **a**. But we have already seen that ∅ cannot be the plural of **a**

*   Existential and generic uses of count uses of mass nouns (that is, the ones in which the mass nouns makes reference to a kind of thing) pattern the same way:

(19)   John noticed several metals in the mine [some metal]   ∃
(20)   Several metals are hard [all metal of those kinds]   GEN
(21)   Several metals are common [no paraphrase available]   GEN

*   "It is difficult to see where we could slide in an ambiguous null determiner to account for these different uses of the NP 'several metals' (…) Since we cannot reasonably account for the various interpretations of NPs like **this kind of metal** or **several metals** by positing an ambiguous null determiner we need to find other way of doing this. But once we do, we would be accounting for exactly the same set of facts as we tried to account for in the bare plural by positing an ambiguous null determiner. So to account for the same set of facts by use of a null ambiguous determiner in one case, and to use some other mechanism in the other cases, would be to miss an important and pervasive generalization in the grammar" (p. 49)

3.   The generic use of BPs cannot be given a quantificational account.

- <u>Claim</u>: bare plurals are <u>NOT</u> associated with a generic quantifier.

(i)   <u>Quantificational variability: How many?</u>

  (1)   Snakes are reptiles (all)
  (2)   Mammals give birth to live young (only adult fertilized females)
  (3)   Mosquitoes carry the paramecium that causes yellow fever (very few in fact do)
  (4)   Seeds don't germinate (false, even though most never do)
  (5)   Bees are sexually sterile (false, even though all but queen and drone are)
  (6)   Prime numbers are odd (false, even though all but two are)

  (7)   Dogs are mammals   (all)
  (8)   Dogs give birth to their young (roughly half)
  (9)   Dogs are females   (false, even though roughly half of them are)

  - If there is a quantifier associated with the generic use of BPs, its meaning will have to be associated with the meaning of the verbal predicate.

[Raj: but can't this be accounted for by the fact that quantifiers are contextually restricted? Tamina observed that the restrictions that we would have to assume here are different from the ones that we assume for overt quantifiers. But we need to specify what exactly would the difference be. We will talk much more about this when we discuss how the quantificational approach deals with this type of sentence]

(ii)   <u>The Port Royal puzzle (Arnauld 1662)</u>

  (10)   Dutchmen are good sailors
  (11)   Dutchmen are sailors

- (10) doesn't entail (11), unlike:

  (12)   Most/All/Some Dutchmen are good sailors.
  (13)   Most/All/Some Dutchmen are sailors.

- So no monotonic quantifier could capture the meaning of the BP.

[Lots of discussion here!

Irene pointed out that (12) doesn't necessarily entail (13). And consider the following examples (Roger Higgins, pc. to Karina Wilkinson): (1) doesn't entail (2).

(1)   My chisel is a good screwdriver
(2)   My chisel is a screwdriver.

        We could modify Higgins' examples by replacing the definite description with a quantifier, and get, I think, the same effect. I believe (3) can be judged true and (4) false. Judgments?

(3)   Most chisels are good screwdrivers.
(4)   Most chisels are screwdrivers.

Then, we saw some examples with BPs where the entailment does go through:

(5)   Elephants are gray mammals

entails both (6) and (7)

(6)   Elephants are gray
(7)   Elephants are mammals.   (Carlson 1977)

and (8) entails (9)

(8)   New Yorkers are veteran subway riders
(9)   New Yorkers are subway riders   (Wilkinson 1991)

[so the entailment from subset to superset seems to go through with some non-intersective adjectives (**veteran**), but not with others (**good**)]

Can we find any case where the entailment from subset to superset goes through for the quantified cases but not the BPs cases?   ]

(iii)   <u>Incorrect truth conditions and special predicates</u>

    (1)   Whiskey bottles come in three sizes
    (2)   G {x: x is a whiskey bottle} {x: x comes in three sizes}

(1) may be true. But (2) will be false no matter how we construct the meaning of the quantifier.

Same for:

    (3)   Lions come from Africa and Asia
    (4)   Bears live in caves as well as in old logs.
    (5)   Palm trees are widespread/common/rare/numerous…

Note:

    (6)   ?? All/most/three/some/many/few… palm trees are widespread
            [only okay in taxonomic reading: all/most/three/some/many/few *types of palm trees…*]

[but this only shows that <u>some </u>uses of BPs cannot be submitted to a quantificational analysysis]

(iii)   <u>Unquantifier-like behavior</u>

- If there is a quantifier in the semantic structure of bare plurals, it fails to exhibit the characteristic behavior of other quantifiers with respect to scope phenomena. Example: (7) exhibits a scope ambiguity. If we think of G as being something like a universal, in (8), it only has a wide scope reading

    (7)   Bill doesn't like all wombats
    (8)   Bill doesn't like wombats

[But: different quantifiers have different scope possibilities: **Bill doesn't like every girl**]

(iv)   <u>Parallel with *this kind of thing.*</u>

[we didn't talk about this]

- 'This kind of thing'-NPs and mass nouns in the count form (taxonomic reading: *three wines, most wines, several wines, few wines…*) behave like bare plurals with respect to the phenomena above. Quantified NPs (*three animals*) also behave like bare plurals on the 'kind of'-reading (*three kinds of animals*).

    (9)   This kind of animal is a mammal
    (10)   This kind of bird gives live birth
    (11)   This kind of container comes in three different sizes.
    (12)   This kind of mammal comes from Africa and Asia
    (13)   This kind of animal is widespread.

- Postulating a GEN operator in this is type of NP would be very problematic.

- Another tack would be to allow the generic instances of the bare plural to be associated with a generic quantifier, but look for another mechanism in the case of other NPs that make reference to kinds of things: loss of generality.

Summary: problems for the quantificational analysis of the generic uses of the bare plural

Semantics of the GEN quantifier?

(i)   A quantificational analysis would have to posit an ambiguous quantifier or a quantifier whose interpretation would depend on the interpretation of the verbal predicate (fluctuating truth conditions)

(ii)   In some cases the quantificational approach would simply gives us the wrong truth conditions (cases in which the verbal predicate cannot be applied to any particular individual)

(iii)   If bare plurals (on the generic reading) are associated with a quantifier, then this quantifier would behave differently, scope-wise, than other quantifiers.

Loss of generality 1:

• NPs that refer to kinds of things ('this kind of thing', *two wines*, *two animals* on one reading) behave like the generic bare plural. Postulating a generic quantifier in those cases is syntactically implausible. Giving a quantificational account for the bare plural (leaving aside the problems above) and a non-quantificational account for these other cases would be "a complete loss of generality, for it is quite evident that an account of one should also be an account of the other".

Loss of generality 2:

• We want to give a unified account for the generic and existential uses of the bare plural

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