

Challenges/ Problems for Carlson 1977

1. Wide scope effects

(i) Sometimes BPs appear to give rise to wide scope effects with anaphora.

1) John saw apples, and Mary saw them too. (Krifka et al. 1995)

This sentence has a reading according to which Mary saw the same apples as John. This can be paraphrased as:

2) $\exists x$ (apples' (x) & saw' (j, x) & saw' (m, x))

Or, assuming stages:

3) $\exists y_s$ (R (y, a) & saw' (j, y) & saw' (m, y))

Krifka et al 1995: "since the existential quantifier has necessarily narrow scope (...) *them* isn't within the scope of this existential quantifier, and it is therefore not obvious how to express that *apples* and *them* should refer to the same apples" (p. 119-120)

4) T (**John saw apples**) = $\exists y_s$ (R (y, a) & saw' (j, y))

If the pronoun in the second sentence is correferential with **apples**, the second sentence will be represented as:

5) $\exists y_s$ (R (y, a) & saw' (m, y))

So:

6) $\exists y_s$ (R (y, a) & saw' (j, y)) & $\exists y_s$ (R (y, a) & saw' (m, y))

Carlson does discuss this type of reading.

7) Dogs entered the room. They began tearing apart my couch (Carlson 1977: 251)

Cooper (1976): pronouns such as **they** in (7) are definite descriptions that contain a free property-variable.

Carlson's adaptation of Cooper's proposal: in the example above, the translation of **they** involves a free variable over stages.

8) T (**dogs entered the room**) = $\exists x_s$ (R (x, d) & entered' (x))

9) T (**they began tearing apart my couch**) =
 $\exists x_o$ ($\forall y_o$ (S (w_s, y_o) \leftrightarrow x_o = y_o) & $\exists z_s$ (R (z_s, x_o) & Began' (z_s)))

Let's assume that the stage of the kind dogs that entered the room is a.

(9) says that there's a unique individual, x, which is uniquely related to some stage (the value of w) in some way (the value of S), and that has a realization that began to tear the couch apart. Suppose g (w) = a, and g(S) = R. We get:

There's a unique individual x such that a is a realization of x and x has a stage that began to tear the couch apart.

Carlson: This is "not a definitive analysis due to the fact that it requires a treatment of group readings of NP's, a matter left unresolved in this work." (p. 255). How would this work once we bring plurals into the picture?

(ii) **intentionally** (Kratzer (1980), for German)

10) John intentionally put belladonnas in the salad because he took them for cherries.

(English translation of a German example in Kratzer (1980))

This sentence can be read as saying that John wanted to put some objects x into the fruit salad which were, in fact, belladonnas, and that the reason for this was that he mistook those objects for cherries. (Intuitions?)

Very roughly:

11) $\exists X$ [belladonnas (X) & John intentionally [put X in the fruit salad]] [because he mistook X for cherries]] (Carlson 1996)

- In order to get this reading, the existential quantifier would have to be outside the scope of *intentionally*.

- But this wouldn't be possible if the existential quantifier is part of the denotation of the verb.

Carlson has a reply to this – Carlson 1996. Let's talk about it next time.

2. ***There*-sentences**

(see discussion in Wilkinson 1991, Chierchia 1998)

On Carlson's account, BPs are names of kinds.

Proper names are bad in existential sentences.

12) *There is John on the fence. (Wilkinson 1991)

If BPs are names, we would expect them to be bad in this context. But, as we have seen, they are not:

13) There are boys on the fence.

Carlson explains the acceptability of sentences like 13) by assuming that the **be** in existential sentences is the one that applies with stage-level adjectives (**be₂**) But this would leave us without an explanation of why ***There is John** is bad (Irene Heim, p.c. to Wilkinson).

Interestingly, NPs of the form "determiner **kind of N**" are good in *there*-sentences (McNally 1992):

14) There is that kind of animal in the zoo.

15) There is every kind of student in my class.

But we can't simply say that kind-denoting NPs are good in *there*-sentences. Definite singulars can denote kinds (16), but are bad in *there*-sentences.

- 16) The lion will become extinct soon (Krifka et al. 1995)
17) *There is the boy on the fence.

Irene: Note that (18) is bad – and nobody can doubt that *canis canis* is the name of a kind.

- 18) * There's *canis canis* in the zoo

(We can't explore this issue further without making some assumptions about *there*-sentences. We will leave this here for the time being.)

3. Singular generic *the*

Carlson: singular definites can function as names of kinds.

- 19) The lion will become extinct soon

If singular definites are names of kinds, we would in principle expect them to behave like BPs. But there are differences:

- Generic definites place more constraints on the types of NPs they can combine with.

NPs that are “too general” are bad (Heny 1972, Vendler 1971; see discussion in Carlson pl 433 – 434)

- 20) (a) The toaster is very common in American households.
(b) ? The gadget is very common in American households.
- 21) (a) Toasters are very common in American households.
(b) Gadgets are very common in American households.
- 22) (a) The sphere is tridimensional
(b) ? The solid object is tridimensional.
- 23) (a) Spheres are tridimensional
(b) Solid objects are tridimensional.

NPs that do not denote “well established kinds” are bad (Vendler 1967)

- 24) (a) The Coke bottle is easy to recycle.
(b) ?? The green bottle is easy to recycle.
- 25) (a) Coke bottles are easy to recycle.
(b) ?? Green bottles are easy to recycle.
- 26) (a) The Bengali tiger is dangerous.
(b) ?? The wounded tiger is dangerous.
- 27) (a) Bengali tigers are dangerous.
(b) Wounded tigers are dangerous.

[all the examples in (19)-(26) are from Katz & Zamparelli 2005; (23) and (24) are modeled after Carlson's *The coke bottle has a narrow neck*/*The green bottle has a narrow neck*, which he attributes to Barbara Partee]

- Existential quantification over stages reading not available:

- 28) Tigers are roaring in the zoo.
29) The tiger is roaring in the zoo. (Chierchia 1998)
- 30) Horses stampeded through the gate.
31) The horse stampeded through the gate. (Krifka et al. 1995)

But cf.

- 32) The horse came to America with Columbus.
33) Man is now on the moon
34) Explorers first saw the buffalo in 1517.
(Carlson 1977)

Carlson: "the contexts in which a definite generic may be used where stages are referred to are those contexts which say something momentous or significant about the species as a whole" (Carlson 1977)

- 35) The horse arrived on my doorstep yesterday.

(32) through (35) seem very different from the case where a BP is interpreted existentially, though!

- There- sentences (see 2. above)

Note: these contrasts do not necessarily invalidate Carlson's theory. It seems that BPs and definite singulars denote different types of kinds. Perhaps by working out the difference we can explain the contrasts in (28) through (31)? See Chierchia (1998), Dayal (1992).

4. Generalization operators needed for positions other than the subject.

Schubert and Pelletier 1987: The G' operator only generalizes on the subject position (it's a VP operator), but we have "binding" effects for other positions.

- 36) Dogs like people for what they are.
37) Paranoids never like people for more than a week.
38) Psychiatrists explain people to themselves.

36) has a reading that can be paraphrase as 'dogs like mankind for what it is'. This can be generated on Carlson's system if we take the object of **like** to admit both objects and kinds.

- 39) $T(\mathbf{like}) = \lambda x_i \lambda y_0 (\mathbf{like}'(y)(x))$

But it also has another reading that we can paraphrase as 'Dogs like individual people for what they are'

To derive this reading, we would need an operator G_2 that elevates **like** from object-level to kind-level with respect to its first argument position.

5. Generic readings of BPs with stage-level predicates?

Carlson's theory predicts that

- (i) BPs subjects with stage-level predicates will have an existential interpretation.
- (ii) BPs subjects with individual-level predicates will have a generic interpretation.

Diesing (1988) presents counterexamples to (i)

- 40) Hospital patients are sick.
- 41) Raising a baby bird is very difficult. Baby birds are hungry, and have to be fed constantly.
- 42) People in bars are drunk. (Diesing 1988: 19)

Wilkinson 1991: Carlson might be able to respond to this by saying that these contexts force the predicates to switch from stage to individual-level, so we aren't really seeing a generic reading of BP subjects with stage-level predicates.

6. Existential readings of BPs with individual-level predicates

Carlson (1989): examples like 43) are predicted to be impossible by Carlson 1977.

- 43) Hurricanes arise in this part of the South Pacific. (Milsark 1974)

43) has two readings.

- (i) Hurricanes in general arise in this part of the South Pacific.
- (ii) There arise hurricanes in this part of the South Pacific.

The only reading predicted by Carlson's account is (i)

- 44) (G' ([x. arise-in-this-part-of-the-SP(x)])(h)

More examples:

- 45) Unfriendly tribesmen dwell just over those hills. (Carlson 1989)
- 46) People with links to organized crime support this candidacy. (Schubert & Pelletier 1987)
- 47) Computers compute the daily weather forecast
(variation on Carlson 1989:8, with sg. indefinite)
- 48) Cats run across my lawn every day.
(variation on Carlson's 1989: 11)

Some references

- Carlson, Gregory. 1989. The Semantic Composition of English Generic Sentences. In eds., G. Chierchia, B. Partee and R. Turner, *Properties, Types and Meaning*, vol. 2., 167-191.
- Carlson, Gregory. 1996. A note on Belladonas. Paper delivered at the 1996 LSA Annual Meeting San Diego
- Chierchia, Gennaro. Reference to kinds across languages. *Natural Language Semantics* 6, 339–405.
- Dayal, V.: 1992, 'The Singular-Plural Distinction in Hindi Generics', in Proceedings of SALT II (OSU Working Papers in Linguistics), The Ohio State University, Columbus.
- Diesing, Molly. 1988. Bare Plural Subjects and the Stage/Individual Contrast. UMass Amherst, ms.
- Katz, Graham and Roberto Zamparelli. 2005. Genericity in Natural Language. ESLLI class notes.
- Kratzer, Angelika. 1980. Die Analyse des Blossen Plural bei Gregory Carlson. *Linguistische Berichte* 70: 47-50.
- Krifka, Manfred, Francis Jeffrey Pelletier, Greg N. Carlson, Alice ter Meulen, Gennaro Chierchia, and Godehard Link. 1995. *The generic book*. Chicago: Chicago University Press.
- McNally, L.: 1992, An Interpretation of the English Existential Construction, Ph.D. dissertation, University of California, Santa Cruz.
- Schubert, L. K. and Pelletier, F. J.: 1987. Problems in the representation of the logical form of generics, plurals, and mass nouns, in E. LePore (ed.), *New Directions in Semantics*, Academic Press, London, chapter 12:385–451
- Wilkinson, Karina. 1991. Studies in the Semantics of Generic Noun Phrases. Ph.D. dissertation, UMass Amherst.