

Some Further Questions on Plurals

(1) Plurality as a Feature of Noun *Phrases*, not Nouns

In class, we've been treating the feature [plural] as a feature of *noun phrases* rather than *nouns*. This is reflected in our rule in (10) on the 'Part 1' handout, repeated below.

- a. Interpretation of Plural NPs
[[NP pl]] = *[[NP]] = 'the closure of [[NP]] under +'

One reason for such a treatment of 'plural' – kept in the background until now – is the ability for Ns taking PP complements to be pluralized. Consider NPs like the following:

b. Plural Ns taking PP Complements

- (i) [pictures [of Dave]]
- (ii) [students [of chemistry]]
- (iii) [rumors [of war]]

c. QUESTION 1

If we were to replace the semantic rule in (a) above to the following, what problems would the phrases in (b) pose to the theory of plurality developed in the 'Part 1' handout?

- (i) Interpretation of Plural Ns
[[N pl]] = *[[N]] = 'the closure of [[N]] under +'

However, a *prima facie* issue for the simple, vaguely stated rule in (1a) is the existence of plural NPs that do not seem to have semantically interpretable singular correspondents. The following illustrates this point.

d. Plural NPs without Semantically Well-Formed Singulars

- (i) men who met in the park (cf. * man who met in the park)
- (ii) people who have split up (cf. * person who has split up)

e. QUESTION 2

What potential problem do the NPs in (d) above raise for the rule in (a)?

f. QUESTION 3

What might be a way of solving this problem? (For this question, you can simply sketch your vision of a solution; full detail is not required.)

(2) **Plurality in Pronouns**

In class, we've largely been focusing on the interpretation of the feature [plural] on NPs. However, another obvious area where this feature appears and affects the interpretation of a sentence is on *pronouns*.

Let's take as representative the plural third person pronoun *they*. Let us assume that this pronoun is the pluralization of a (gender neutral) third person singular pronoun, as represented below.

a. The Structure of *They*

[[he/she] pl]_i

b. QUESTION 1

Can we straightforwardly apply our theory of the semantics of plural NPs (represented by the rule in (1a) above) to the interpretation of plural pronouns?

c. QUESTION 2

Please **sketch** out an answer to the following question: what should be meaning of the pronoun "they" be, in order to capture the following set of facts.
(HINT: refer to pages 244 – 245 of Heim & Kratzer 1998)

(i) Dave₁ saw [Pam and Sue]₂. They_{2/*1} were happy to be outside.

d. QUESTION 3

Does the story you sketched for Question 2 above encounter any problems with the sentence in (i) below. Bear in mind that it possesses the T-conditions in (ii). (Note that you do not have to solve such a problem, only observe and describe it.)

(i) Dave and Sue each love their families.

(ii) $\forall y. (y \leq \mathbf{Dave+Sue} \ \& \ AT(y)) \rightarrow y \text{ loves } y\text{'s family.}$

(3) **The Meaning of ‘Exactly Three’**

In class, we noted that the quantifier ‘exactly three’ cannot be given a meaning of the kind in (a) below:

a. $[[\text{exactly three}]] = \lambda P. \lambda Q. \exists x. P(x) \ \& \ | \{z : z \leq x \ \& \ AT(z)\} | = 3 \ \& \ Q(x)$
Some group of exactly three [[NP]] are [[QP]]

b. QUESTION 1:

Please provide a lexical entry for “exactly three” that (i) permits it compose semantically with plural NPs, but (ii) predicts the correct truth conditions for sentences like “exactly three boys smoke”.

Interestingly, it’s been observed that sentences like (c) below possess readings that are true in situations like that in (d).

c. Exactly three officers shot exactly three targets.

d. Officers (shooting) Targets

Officer1 \longrightarrow Target1

Officer2 \longrightarrow Target2

Officer3 \longrightarrow Target3

e. QUESTION 2:

Does the existence of a reading for (c) that is true in situation (d) pose a problem for the semantics you propose in QUESTION 1? If so, what? (Note that you do not have to solve the problem, only observe and describe it.)